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- U.S. Patents Fulltext (1971-1975) (File 652)

- U.S. Patents Fulltext (1976-present) (File 654)
- WIPO/PCT Patents Fulltext (File 349)
- TRADEMARKSCAN - U.S. Federal (File 226)

DialogLink 5 Release Notes

New features available in the latest release of DialogLink 5 (August 2006)

- Ability to resize images for easier incorporation into DialogLink Reports
- New settings allow users to be prompted to save Dialog search sessions in the format of their choice (Microsoft Word, RTF, PDF, HTML, or TEXT)
- Ability to set up Dialog Alerts by Chemical Structures and the addition of Index Chemicus as a structure searchable database
- Support for connections to STN Germany and STN Japan services

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*** ANNOUNCEMENTS ***

*** FREE FILE OF THE MONTH: World News Connection (WNC), FILE #985

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NEW FILE

***File 651, TRADEMARKSCAN(R) - China. See HELP NEWS 651 for details.

RESUMED UPDATING

***File 523, D&B European Financial Records

RELOADS COMPLETED

***File 227, TRADEMARKSCAN(R) - Community Trademarks

FILES RENAMED

***File 321, PLASPEC now known as Plastic Properties Database

FILES REMOVED

***File 601, Early Edition Canada

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? Help Off Line

* * *

Connecting to Rob Pond - Dialog - 264751

Connected to Dialog via SMS002021985

? B 15, 9, 610, 810, 275, 476, 624, 621, 636, 613, 813, 16, 160, 634, 148, 20, 35, 583,
65, 2, 347, 348, 349, 474, 475, 99, 256, 635, 570, PAPERSMJ, PAPERSEU, 47

>>>W: 476 does not exist

1 of the specified files is not available

[File 15] ABI/Inform(R) 1971-2009/Jan 03

(c) 2009 ProQuest Info&Learning. All rights reserved.

[File 9] Business & Industry(R) Jul/1994-2009/Jan 04
(c) 2009 Gale/Cengage. All rights reserved.

[File 610] Business Wire 1999-2009/Jan 06
(c) 2009 Business Wire. All rights reserved.

**File 610: File 610 now contains data from 3/99 forward. Archive data (1986-2/99) is available in File 810.*

[File 810] Business Wire 1986-1999/Feb 28
(c) 1999 Business Wire . All rights reserved.

[File 275] Gale Group Computer DB(TM) 1983-2009/Dec 15
(c) 2009 Gale/Cengage. All rights reserved.

[File 624] McGraw-Hill Publications 1985-2009/Jan 06
(c) 2009 McGraw-Hill Co. Inc. All rights reserved.

[File 621] Gale Group New Prod.Annou.(R) 1985-2009/Dec 03
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[File 636] Gale Group Newsletter DB(TM) 1987-2009/Dec 18
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[File 613] PR Newswire 1999-2009/Jan 06
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**File 613: File 613 now contains data from 5/99 forward. Archive data (1987-4/99) is available in File 813.*

[File 813] PR Newswire 1987-1999/Apr 30
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[File 16] Gale Group PROMT(R) 1990-2009/Dec 18
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**File 16: Because of updating irregularities, the banner and the update (UD=) may vary.*

[File 160] Gale Group PROMT(R) 1972-1989
(c) 1999 The Gale Group. All rights reserved.

[File 634] San Jose Mercury Jun 1985-2009/Jan 03
(c) 2009 San Jose Mercury News. All rights reserved.

[File 148] Gale Group Trade & Industry DB 1976-2008/Dec 22
(c) 2008 Gale/Cengage. All rights reserved.

**File 148: The CURRENT feature is not working in File 148. See HELP NEWS148.*

[File 20] Dialog Global Reporter 1997-2009/Jan 06
(c) 2009 Dialog. All rights reserved.

[File 35] Dissertation Abs Online 1861-2008/Nov
(c) 2008 ProQuest Info&Learning. All rights reserved.

[File 583] Gale Group Globalbase(TM) 1986-2002/Dec 13
(c) 2002 Gale/Cengage. All rights reserved.

**File 583: This file is no longer updating as of 12-13-2002.*

[File 65] Inside Conferences 1993-2009/Jan 06
(c) 2009 BLDSC all rts. reserv. All rights reserved.

[File 2] INSPEC 1898-2008/Nov W4

(c) 2008 Institution of Electrical Engineers. All rights reserved.

[File 347] JAPIO Dec 1976-2008/Aug(Updated 081208)

(c) 2008 JPO & JAPIO. All rights reserved.

[File 348] EUROPEAN PATENTS 1978-200852

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[File 349] PCT FULLTEXT 1979-2008/UB=20090101|UT=20081225

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[File 475] Wall Street Journal Abs 1973-2009/Jan 06

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[File 99] Wilson Appl. Sci & Tech Abs 1983-2008/Oct

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[File 256] TecInfoSource 82-2008/Oct

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[File 635] Business Dateline(R) 1985-2009/Jan 03

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[File 387] The Denver Post 1994-2009/Jan 05

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[File 471] New York Times Fulltext 1980-2009/Jan 05

(c) 2009 The New York Times. All rights reserved.

[File 492] Arizona Repub/Phoenix Gaz 19862002/Jan 06

(c) 2002 Phoenix Newspapers. All rights reserved.

**File 492: File 492 is closed (no longer updating). Use Newsroom, Files 989 and 990, for current records.*

[File 494] St LouisPost-Dispatch 1988-2009/Jan 04

(c) 2009 St Louis Post-Dispatch. All rights reserved.

[File 631] Boston Globe 1980-2009/Jan 02

(c) 2009 Boston Globe. All rights reserved.

[File 633] Phil.Inquirer 1983-2009/Jan 06

(c) 2009 Philadelphia Newspapers Inc. All rights reserved.

[File 638] Newsday/New York Newsday 1987-2009/Jan 06

(c) 2009 Newsday Inc. All rights reserved.

[File 640] San Francisco Chronicle 1988-2008/Dec 21

(c) 2009 Chronicle Publ. Co. All rights reserved.

[File 641] Rocky Mountain News Jun 1989-2009/Jan 06

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[File 702] Miami Herald 1983-2009/Jan 05
(c) 2009 The Miami Herald Publishing Co. All rights reserved.

[File 703] USA Today 1989-2009/Jan 05
(c) 2009 USA Today. All rights reserved.

[File 704] (Portland)The Oregonian 1989-2009/Jan 04
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[File 713] Atlanta J/Const. 1989-2008/Dec 28
(c) 2009 Atlanta Newspapers. All rights reserved.

[File 714] (Baltimore) The Sun 1990-2009/Jan 04
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[File 715] Christian Sci.Mon. 1989-2009/Jan 05
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[File 725] (Cleveland)Plain Dealer Aug 1991-2009/Jan 02
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[File 735] St. Petersburg Times 1989- 2008/Dec 21
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[File 477] Irish Times 1999-2009/Jan 06
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[File 710] Times/Sun.Times(London) Jun 1988-2008/Dec 22
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[File 711] Independent(London) Sep 1988-2006/Dec 12
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**File 711: This file does not update. See File 757 for full daily coverage from many European sources.*

[File 756] Daily/Sunday Telegraph 2000-2009/Jan 06
(c) 2009 Telegraph Group. All rights reserved.

[File 757] Mirror Publications/Independent Newspapers 2000-2009/Jan 06
(c) 2009. All rights reserved.

[File 47] Gale Group Magazine DB(TM) 1959-2009/Dec 30
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**File 47: UD names have been adjusted to reflect process dates All data is present*

? S AU=(takahashi, s OR takahashi s? OR shinichi(2N)takahashi) OR
BY=(shinichi(2N)takahashi)

>>>W: One or more prefixes are unsupported

or undefined in one or more files.

Input error: Numeric characters expected

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49    AU=TAKAHASHI, S
19592 AU=TAKAHASHI S?
9969  AU=SHINICHI
19325 AU=TAKAHASHI
26    AU=SHINICHI (2N)AU=TAKAHASHI
0     BY=SHINICHI
15    BY=TAKAHASHI
0     BY=SHINICHI (2N)BY=TAKAHASHI
S1    19641  S AU=(TAKAHASHI, S OR TAKAHASHI S? OR SHINICHI (2N)TAKAHASHI) OR
BY=(SHINICHI (2N)TAKAHASHI)

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?  S AU=(kawano, t OR kawano t? OR takenari (2N)kawano) OR BY=(takenari (2N)kawano)
>>>W: One or more prefixes are unsupported
      or undefined in one or more files.

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Input error: Numeric characters expected

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3     AU=KAWANO, T
1054  AU=KAWANO T?
21    AU=TAKENARI
1599  AU=KAWANO
2     AU=TAKENARI (2N)AU=KAWANO
0     BY=TAKENARI
0     BY=KAWANO
0     BY=TAKENARI (2N)BY=KAWANO
S2    1057  S AU=(KAWANO, T OR KAWANO T? OR TAKENARI (2N)KAWANO) OR
BY=(TAKENARI (2N)KAWANO)

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?  S AU=(tsugu, k OR tsugu k? OR kazuo (2N)tsugu) OR BY=(kazuo (2N)tsugu)
>>>W: One or more prefixes are unsupported
      or undefined in one or more files.

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Input error: Numeric characters expected

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0     AU=TSUGU, K
5     AU=TSUGU K?
11873 AU=KAZUO
3     AU=TSUGU
2     AU=KAZUO (2N)AU=TSUGU

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0 BY=KAZUO
0 BY=TSUGU
0 BY=KAZUO(2N)BY=TSUGU
S3      5 S AU=(TSUGU, K OR TSUGU K? OR KAZUO(2N)TSUGU) OR BY=(KAZUO(2N)TSUGU)

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? S AU=(nishioka, k OR nishioka k? OR (kenneth or ken)(2N)nishioka) OR BY=((ken or kenneth)(2N)nishioka)

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>>>W: One or more prefixes are unsupported
or undefined in one or more files.

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2 AU=NISHIOKA, K
1942 AU=NISHIOKA K?
68626 AU=KENNETH
107974 AU=KEN
834 AU=NISHIOKA
9 (AU=KENNETH OR AU=KEN)(2N)AU=NISHIOKA
179 BY=KEN
172 BY=KENNETH
0 BY=NISHIOKA
0 (BY=KEN OR BY=KENNETH)(2N)BY=NISHIOKA
S4      1944 S AU=(NISHIOKA, K OR NISHIOKA K? OR (KENNETH OR KEN)(2N)NISHIOKA) OR
BY=((KEN OR KENNETH)(2N)NISHIOKA)

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? s pd<20030130 and (s1 or s2 or s3 or s4)

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>>>W: One or more prefixes are unsupported

or undefined in one or more files.

104187438 PD<20030130

19641 S1

1057 S2

5 S3

1944 S4

S5 18292 S PD<20030130 AND (S1 OR S2 OR S3 OR S4)

? s s5 and ((divert??? or diversion or rerout??? or redirect???) (5n) (shipment or shipments or delivery or deliveries or in(w)transit or freight or unit or units or package or packages or parcel or parcels))

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185702 DIVERSION

80119	REROUT???
247176	REDIRECT???
596985	SHIPMENT
1114932	SHIPMENTS
5466359	DELIVERY
670395	DELIVERIES
166518277	IN
1039615	TRANSIT
89124	IN(W)TRANSIT
943224	FREIGHT
9742698	UNIT
6485839	UNITS
4165485	PACKAGE
1962776	PACKAGES
393408	PARCEL
179505	PARCELS

14015 (((DIVERTE?? OR DIVERSTON) OR REROUT???) OR REDIRECT???) (5N) (((((((SHIPMENT OR SHIPMENTS) OR DELIVERY) OR DELIVERIES) OR IN(W)TRANSIT) OR FREIGHT) OR UNIT) OR UNITS) OR PACKAGE) OR PACKAGES) OR PARCEL) OR PARCELS)

S6 0 S S5 AND ((DIVERTE?? OR DIVERSTON OR REROUT?? OR REDIRECT??) (5N) (SHIPMENT OR SHIPMENTS OR DELIVERY OR DELIVERIES OR IN(W)TRANSIT OR FREIGHT OR UNIT OR UNITS OR PACKAGE OR PACKAGES OR PARCEL OR PARCELS))

? d s

Set	Items	Description
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S1	19641	S AU=(TAKAHASHI, S OR TAKAHASHI S? OR SHINICHI (2N)TAKAHASHI) OR BY=(SHINICHI (2N)TAKAHASHI)
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S2	1057	S AU=(KAWANO, T OR KAWANO T? OR TAKENARI (2N)KAWANO) OR BY=(TAKENARI (2N)KAWANO)
----	------	--

S3	5	S AU=(TSUGU, K OR TSUGU K? OR KAZUO (2N)TSUGU) OR BY=(KAZUO (2N)TSUGU)
----	---	--

S4	1944	S AU=(NISHIOKA, K OR NISHIOKA K? OR (KENNETH OR KEN) (2N)NISHIOKA) OR BY=((KEN OR KENNETH) (2N)NISHIOKA)
----	------	--

S5	18292	S PD<20030130 AND (S1 OR S2 OR S3 OR S4)
----	-------	--

S6 0 S S5 AND ((DIVERTE?? OR DIVERSTON OR REROUT?? OR REDIRECT??) (5N) (SHIPMENT OR SHIPMENTS OR DELIVERY OR DELIVERIES OR IN(W)TRANSIT OR FREIGHT OR UNIT OR UNITS OR PACKAGE OR PACKAGES OR PARCEL OR PARCELS))

? s s5 and (((estimat????)(5)(time or times or dates or date or schedul????)) or eta or etas) and (destination or destinations or dropoff or drop(w)off or hub or location or locations)

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18292	S5
0	ESTIMAT????)(5)(TIME
15752452	TIMES
1398741	DATES
13097363	DATE
0	SCHEDUL???)
131102	ETA
1926	ETAS
1424942	DESTINATION
796715	DESTINATIONS
17636	DROPOFF
4324937	DROP
25560237	OFF
176830	DROP(W)OFF
1036232	HUB
4802463	LOCATION
3924460	LOCATIONS

S7 115 S S5 AND (((ESTIMAT????)(5)(TIME OR TIMES OR DATES OR DATE OR SCHEDUL????)) OR ETA OR ETAS) AND (DESTINATION OR DESTINATIONS OR DROPOFF OR DROP(W)OFF OR HUB OR LOCATION OR LOCATIONS)

? s s7 and (shipment or shipments or freight or carrier or package or packages or parcel or parcel or container or containers)

115	S7
596985	SHIPMENT
1114932	SHIPMENTS
943224	FREIGHT
2939402	CARRIER
4165485	PACKAGE

1962776 PACKAGES
393408 PARCEL
393408 PARCEL
1077891 CONTAINER
959803 CONTAINERS

S8 26 S S7 AND (SHIPMENT OR SHIPMENTS OR FREIGHT OR CARRIER OR PACKAGE OR PACKAGES OR PARCEL OR PARCEL OR CONTAINER OR CONTAINERS)

? rd

>>>W: Duplicate detection is not supported for File 347.

Duplicate detection is not supported for File 348.

Duplicate detection is not supported for File 349.

Records from unsupported files will be retained in the RD set.

S9 26 RD (UNIQUE ITEMS)

? t s9/k/all

9/K/1 (Item 1 from file: 348)

EUROPEAN PATENTS

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Inventor:

• TAKAHASHI, Sakaru, c/o PLAST CORPORATION...

;;

Country	Number	Kind	Date
Type	Pub. Date	Kind	Text
...Date of request for examination...	...Date of request for examination	19	
Available Text	Language	Update	Word Count
Total Word Count (Document A)			
Total Word Count (Document B)			
Total Word Count (All Documents)			

Specification: ...and which conceals a bottom face portion to give the impression of a tightly sealed package, and also relates to a package body, a feed roll of packaging material having a pleat, and manufacturing methods therefor. BACKGROUND... outward appearance is unpleasant, and the stand-up quality is poor.

An indefinite outer shape container disclosed in Japanese Patent Application Publication No.2001-031110 is a packaging pouch formed by... face portion rarely match perfectly. Further, when heat sealing is performed creases occur in various locations, giving a pleat with an unpleasant appearance and an incomplete peripheral heat seal such that the pouch is totally inappropriate for use as a liquid container.

According to a conventional vertical form-fill-seal method, a packaging material is issued from... below and above the packaged product.

The packaging tube is manufactured into a vertical pillow package body with a rectangular bottom by abutting the packaging tube at the top and bottom... tube and ribs are formed at four sides of the tube.

However, the vertical pillow package body with a rectangular bottom which is manufactured by this conventional form-fill-seal method... thereby form gussets, and thus the packaging tube is manufactured into a gusseted horizontal pillow package body.

Thanks to the gussets of the gusseted horizontal pillow package body manufactured by this conventional horizontal form-fill-seal method, the width of the packaging... packaged product is a lens-attached camera, for example.

However, in this gusseted horizontal pillow package body, the gusset-inserted end seal is usually in pinch pleat form and therefore the package body is not placed on a shelf by inclining the end seal horizontally and rotating the package body 90 degrees such that the horizontally inclined end seal forms a bottom face portion... the front face side and rear face side to become rounded. As a result, the package body lacks a stable stand-up quality and does not give the impression of a tightly sealed package.

DISCLOSURE OF THE INVENTION

The present invention has been invented in consideration of the aforementioned... and it is an object thereof to provide a stand-up packaging pouch and a package body provided with a pleat which is formed by folding a part of a packaging... or the lower end of the peripheral face portion of the packaging pouch or the package body to conceal a bottom face portion of them, in which the pleat is unlikely... rear face portion, or the peripheral face portion, thereby giving the impression of a tight package (i.e., a package having a clear-cut outline), in which the pleat does not appear to be independent, and which may be used as a liquid container due to the complete sealing property of the pleat portion. The present invention comprises the... intermediate position of at least the front face portion and rear face portion.

(7) A package body which is formed by filling the stand-up packaging pouch according to any one... face portion of the pleat, whereby the pleat conceals the bottom face portion.

(9) A package body which is constituted by a packaging material having a pleat which extends in an... fill-seal machine to continuously mass-produce a pleated flattened pouch or a pleated pillow package body.

(10) A feed roll of packaging material having a pleat which is constituted by... of the present invention is to provide a manufacturing method for a pleated vertical pillow package body using a vertical form-fill-seal method in which a pleat is suspended around... packaging can be continuously mass-produced.

(12) A method for manufacturing a pleated vertical pillow package body, comprising:

issuing a packaging material from a packaging material feed roll and heat sealing... the packaging tube between the double heat seal to form a stand-up vertical pillow package body.

(13) A method for continuously manufacturing a stand-up pleated vertical pillow package body, comprising:

issuing a pleated packaging material from a pleated packaging material feed roll;

hooking... tube between the double heat seal.

(14) The manufacturing method for a pleated vertical pillow package body according to the above (12) or (13), comprising:

bringing the outer face of the... of the present invention is to provide a manufacturing method for a pleated horizontal pillow package body according to which, by producing a horizontal pillow package body and rotating the

completed and severed package body 90 degrees such that the pleat is suspended around the periphery of the bottom face portion to thereby conceal the bottom face portion, a pleated package body having a stable self-standing quality and giving an impression of tight packaging can be obtained.

(15) A manufacturing method for a horizontal pillow package body, comprising:

hooking onto a former a pleated packaging material having pleats each of which... a product to be packaged, with the opening thereof closed, and thus formed into a package body. Fig. 13 (e) is a perspective view showing six packaging bodies gathered together and... pouch filled with a packaged product and with the opening thereof closed to form a package body. Fig. 14(d) is a perspective view of a packaging material provided with a... pouch filled with a packaged product and with the opening thereof closed to form a package body. Fig. 15(d) is a perspective view of a pleated packaging material. Fig. 15... pouch filled with a packaged product and with the opening thereof closed to form a package body. Fig. 16 (d) is a perspective view of a pleated packaging material. Fig. 16... pouch filled with a packaged product and with the opening thereof closed to form a package body. Fig. 17(e) is a perspective view showing the package body provided with a bottom gusset, and Fig. 17(f) is a perspective view showing the package body with a folded bottom face portion.

Fig. 18 is a schematic overall perspective view... packaging material according to the present invention shown in Fig. 19 and then forming a package body using the pouch. Fig. 21(a) is a perspective view of a pleated packaging... of a vertical form-fill-seal machine which is capable of manufacturing a vertical pillow package body having a pleat according to the present invention.

Fig. 26 shows horizontal sections of certain locations of the vertical form-fill-seal machine required for describing the manufacturing process.

Fig. 27 shows a perspective view of a vertical pillow package body having a pleat manufactured by the vertical form-fill-seal machine of Fig. 25... of a horizontal form-fill-seal machine which is capable of manufacturing a horizontal pillow package body having a pleat according to the present invention.

Fig. 29 is a packaging process diagram for providing a pleated horizontal pillow package body.

BEST MODE FOR CARRYING OUT THE INVENTION

A stand-up packaging pouch and package body according to a first embodiment of the present invention will be described with reference... 1.

This embodiment comprises the stand-up packaging pouch described above in (1) and the package body described above in (7).

Fig. 1(a) is a perspective view of a stand... does not appear to be independent therefrom and thus an impression of a tightly sealed package is obtained. Moreover, since the pleat 9 is not formed by heat sealing the edges... complete hermetic sealing can be ensured, making the pouch suitable for use as a liquid container.

The packaging material F used for manufacturing the stand-up packaging pouch is constituted by... portion and rear face portion.

As shown in Fig. 2, when a plurality of the package bodies P are to be displayed in a stacked formation, the pleat length is increased... can be displayed in a multiple-level stacked formation.

A stand-up packaging pouch and package body according to a second embodiment of the present invention will now be described with... embodiment comprises the stand-up packaging pouch described in claims 1 and 2 and the package body described in claim 7.

Fig. 3(a) is a perspective view of the stand... form as shown in Fig. 3(b) is obtained.

A stand-up packaging pouch and package body according to a third embodiment of the present invention will now be described with... 4.

This embodiment comprises the stand-up packaging pouch described in claim 3 and the package body described in claim 7.

Fig. 4(a) shows a perspective view of the stand... as a flattened pouch having a three way gusset.

A stand-up packaging pouch and package body according to a fourth embodiment of the present invention will now be described with... embodiment comprises the stand-up packaging pouch described in claims 3 and 4 and the package body described in claim 7.

Fig. 5(a) shows a perspective view of the stand... difference relates to the fact that the former are manufactured, stacked, and bundled by a package maker and then sold to a food manufacturing company to be opened out into three... a bottom heat seal is applied to form a bottom face portion, whereupon the resultant package body is returned to its original position. This modified example is included in the stand-up packaging pouch described in the aforementioned (3) and (4) and the package body described in the aforementioned (7).

A stand-up packaging pouch and package body according to a fifth embodiment of the present invention will now be described with... This embodiment comprises the stand-up packaging pouch described in (3) and (4) and the package body described in claim 7.

Fig. 6(a) shows a perspective view of the stand... This embodiment comprises the stand-up packaging pouch described in (4) and (5) and the package body described in (7).

Fig. 7(a) shows a perspective view of the stand-up... This embodiment comprises the stand-up packaging pouch described in (4) and (5) and the package body described in (7).

Fig. 8(a) shows a perspective view of the stand-up... Fig. 9.

This embodiment comprises the stand-up packaging pouch described in (6) and the package body described in (7).

Fig. 9(a) shows a perspective view of the stand-up... Fig. 10.

This embodiment comprises the stand-up packaging pouch described in (4) and the package body described in (7).

Fig. 10(a) shows a perspective view of the stand-up... Fig. 11.

This embodiment comprises the stand-up packaging pouch described in (5) and the package body described in (7).

Fig. 11(a) shows a perspective view of the stand-up... Fig. 12.

This embodiment comprises the stand-up packaging pouch described in (6) and the package body described in (7).

Fig. 12(a) shows a perspective view of the stand-up... Fig. 13.

This embodiment comprises the stand-up packaging pouch described in (3) and the package body described in (7).

Fig. 13 (a) shows a perspective view of the stand-up... a product to be packaged, with the opening thereof closed, and thus formed into a package body.

The stand-up packaging pouch of this embodiment is manufactured as a flattened pouch... be stacked and displayed as shown in Fig. 2.

A stand-up packaging pouch and package body according to a thirteenth embodiment of the present invention will now be described with... ..Fig. 14.

This embodiment comprises the stand-up packaging pouch described in (8) and the package body described in (9).

Fig. 14(a) shows a perspective view of the stand-up... ..pouch filled with a packaged product and with the opening thereof closed to form a package body. Fig. 14(d) is a perspective view of packaging material provided with a pleat... ..may be formed as shown in Fig. 4(c).

A stand-up packaging pouch and package body according to a fourteenth embodiment of the present invention will now be described with... ..Fig. 15.

This embodiment comprises the stand-up packaging pouch described in (8) and the package body described in (9).

Fig. 15(a) shows a perspective view of the stand-up... ..pouch filled with a packaged product and with the opening thereof closed to form a package body. Fig. 15(d) is a perspective view of pleated packaging material. Fig. 15(e... ..Fig. 15(c) and concealed inside the pleat 9.

A stand-up packaging pouch and package body according to a fifteenth embodiment of the present invention will now be described with... ..Fig. 16.

This embodiment comprises the stand-up packaging pouch described in (8) and the package body described in (9).

Fig. 16(a) shows a perspective view of the stand-up... ..pouch filled with a packaged product and with the opening thereof closed to form a package body. Fig. 16(d) is a perspective view of pleated packaging material. Fig. 16(e... ..face portion 12 is defined and formed by the provision of the pleat 15.

A package body according to a sixteenth embodiment of the present invention will now be described with reference to Fig. 17. This embodiment comprises the package body described in claim 9.

Fig. 17(a) is a perspective view of pleated packaging... ..pouch filled with a packaged product and with the opening thereof closed to form a package body.

As shown in Fig. 17(b), the stand-up packaging pouch of this embodiment... ..is formed as shown in Fig. 17(d) and concealed inside the pleat 9.

The package body of (9) may be formed by applying either the bottom heat seal or the... ..remaining top heat seal or bottom heat seal following filling of the packaged product. The package body of (9) also includes a package body which is filled with the product by a form-fill-seal machine. When the... ..lower side pouch is turned upside down and transported on a conveyor. The pouch and package body shown in Fig. 17 are substantially equal to a package body which is manufactured and filled using a form-fill-seal machine. A package body which is formed, filled and sealed by a form-fill-seal machine may be... ..but if the pleat h were to be inclined in the direction of motion, the location of the pleat may cause a defect in the manufactured pouch, and therefore the pleat... ..not appear to be independent therefrom. As a result, an impression of a tightly sealed package is obtained, the bottom face portion 50 is concealed by the pleat h, and a... ..not absolutely necessary to form a top gusset.

In this pleated flattened pouch and the package body thereof, since the pleat h is suspended from the peripheral edge of the bottom... ..alone does not appear to be independent and thus an impression of a tightly sealed package is obtained. Further, since the pleat h conceals the bottom face portion 50, the pleated... ..the packaging material F1, cut, and heat sealed to the packaging material F1 at the location of the pleat-forming device 27.

When reinforcing material is used, an anti-buckling force... ..intermittently.

To describe a specific constitution for ensuring a box motion, when the pleat folding location of the packaging material F1 corresponds to the gap between the gap forming plates 27a... ..the pleated packaging material of the present invention may be manufactured into a pleated pillow package body using a vertical... ..a tubular form without

catching on the former. In the case of a vertical pillow package body, the packaging material is turned upside down such that the pleat is at the lower end. In the case of a horizontal pillow package body, the packaging material is rotated by 90 degrees such that the end heat seal... ..the upper end, rather than solely on the lower end.

When a packaging pouch or package body is produced by a pouch forming machine or a form-fill-seal machine using... ..gusset which will be folded inside the top heat seal of a lower vertical pillow package body which is to be subsequently heat sealed, cut, and severed, and a bottom gusset which will be folded inside the bottom heat seal of the subsequent upper vertical pillow package body P. A double heat seal (a top heat seal and a bottom heat seal... ..film feeding device. The sealing cycle is repeated in this manner.

The severed vertical pillow package body P is formed with the pleat h at its upper end, and hence the two side faces of the vertical pillow package body are supported by a vacuum support and rotation means 88. Following severance, the package body is turned upside down such that the pleat h is provided on the lower... ..placed on a conveyor 89 to be transported.

Note that since the severed vertical pillow package body P is turned upside down such that the pleat h is provided on the lower end, the top heat seal and bottom heat seal are reversed in the package body when compared with a normal vertical form-fill-seal method.

Fig. 27 shows a perspective view of a pleated vertical pillow package body which is manufactured by the vertical form-fill-seal machine described above.

In this pleated vertical pillow package body P, at the part below the pleat h, a bottom gusset is formed in... ..face portion concealed behind the pleat h, thus giving the impression of a tightly sealed package, is obtained.

The peripheral scope of the invention pertaining to a pleated vertical pillow package body will now be described.

In the vertical form-fill-seal machine shown in Fig. 25 which is capable of manufacturing a pleated vertical pillow package body, ribs do not have to be provided on the packaging tube H. In this... ..the vertical form-fill-seal machine which is capable of manufacturing the pleated vertical pillow package body shown in Fig. 25 may be performed as a pinch type heat seal or... ..the vertical form-fill-seal machine which is capable of manufacturing the pleated vertical pillow package body shown in Fig. 25 may be formed such that a packaging material is issued... ..onto the feed roll. In other words, the manufacturing method for a pleated vertical pillow package body according to the present invention may be performed in outline for the process of... ..pleated packaging material after using this device. In the manufacturing method for a pleated pillow package body according to the aforementioned (12) and (13), pleat formation may be performed using a... ..packaging material.

The packaging material F4 used in the manufacture of the pleated vertical pillow package body is constituted similarly to the packaging material F4 used in the description of the... ..be constituted solely by sealant film.

Next, a manufacturing method for a pleated horizontal pillow package body according to the present invention will be described with reference to Fig. 28.

Fig... ..type horizontal form-fill-seal machine which is capable of manufacturing a pleated horizontal pillow package body.

In Fig. 28, the feed roll R1 is a feed roll for pleated packaging... ..gusset.

By means of the aforementioned procedures, the packaging pouch is completed. When the severed package body is rotated 90 degrees, the pleat is suspended from the periphery of the bottom face portion, thereby concealing the bottom face portion to provide a pleated horizontal pillow package body with a stable self-standing quality and which gives the impression of a tightly sealed package. Fig. 29 is a view showing a sealing process for units of horizontal pillow packaged... ..the inside of the pleat forms an empty raised bottom, allowing the completed horizontal pillow package body to be displayed on a shelf in a multi-level stacked form.

The pleated... ..by a sealant film.

INDUSTRIAL APPLICABILITY

As described above, the stand-up packaging pouch and package body of the present invention are constituted with a pleat which is provided at least... ..independent therefrom, and as a result a tight packaging form is produced so that a package body with a highly attractive appearance can be manufactured. Moreover, the sealing quality of the pleat is ensured, and therefore the package body may be favorably used as a container for liquids.

The pleated packaging material feed roll of the present invention is capable of... ..of the pleat is increased, the space which is surrounded by the pleat when a

package body is formed can be increased such that a plurality of packaging bodies can be displayed in stacked form.

According to the manufacturing method for a pleated vertical pillow package body of the present invention, a pleat with no likelihood of creases and a pleasing... ..ensured, pleated vertical pillow packaging bodies can be continuously mass-produced for use as liquid containers.

Further, since the downstream side of the packaging material is not stretched when the pleat... ..can be set accurately, and thus when the manufacturing method for a pleated vertical pillow package body is implemented, the packaging bodies are produced in a uniform size.

Moreover, the width... ..can be mass-produced.

Further, according to the manufacturing method for a pleated horizontal pillow package body of the present invention, pleated horizontal pillow packaging bodies may be continuously mass-produced... ..quality of the pleat part is ensured, these packaging bodies may be applied as liquid containers.

Claims: ...intermediate position of at least the front face portion and rear face portion.

7. A package body which is formed by filling the stand-up packaging pouch according to any one... ..face portion of the pleat, whereby the pleat conceals the bottom face portion.

9. A package body which is constituted by a packaging material having a pleat which extends in an... ..material with the pleats inclined downstream.

12. A method for manufacturing a pleated vertical pillow package body, comprising:

issuing a packaging material from a packaging material feed roll and heat sealing... ..the packaging tube between the double heat seal to form a stand-up vertical pillow package body.

13. A method for continuously manufacturing a stand-up pleated vertical pillow package body, comprising:

issuing a pleated packaging material from a pleated packaging material feed roll;

hooking... ..tube between the double heat seal.

14. The manufacturing method for a pleated vertical pillow package body according to claim 12 or 13, comprising:

bringing the outer face of the feed... ..next intermittent motion of the feed roll.

15. A manufacturing method for a horizontal pillow package body, comprising:

hooking onto a former a pleated packaging material having pleats, each of which...

Inventor:

- ...JP)
 ; ;
- TAKAHASHI, Satoshi, c/o Instruments, Hitachi, Ltd...
 ; ;

Country	Number	Kind	Date
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Abstract ...area of the sample is coincided to display. The present invention allows detecting the accurate location of fluorescence or luminescence in a given part of the biological sample.

Type	Pub. Date	Kind	Text
...Date of request for examination	19		
Available Text	Language	Update	Word Count
Total Word Count (Document A)			
Total Word Count (Document B)			
Total Word Count (All Documents)			

Specification: ...chemical, the stained cytological structure is observed after targeting the microscopic field to the luminescence location detected by the light-emitting image. This method evaluates the luminescence image and stained image... ...a method and apparatus for optical measurement of biological samples, which allow detecting much accurate location of fluorescence or luminescence from a given location on a biological sample.

The present invention having achieved the above objects may incorporate:

(1... ...resolution of said transmission light image is in the range of from twice to twenty times of the resolution of said fluorescent or luminescence image.

(4) A method of optical measurement... ...unit, 24--rinse solution sprayer unit, 25--rinse collecting unit, 26--group of stain solution containers, 26-1--stain A container, 26-2--stain B container, 26-3--clearing solution container, 26-4--tubing cleaning solution container, 27--rinse solution containers, 27-1--rinse solution container, 27-2--fractioning solution container, 27-3--affinity solution A container, 27-4--affinity solution B container, 28--electromagnetic valves, 29--electromagnetic valves, 30--electromagnetic valves,31--electromagnetic valves, 32--stain solution... ...solution collection pump, 36--stain solution tubings, 37--rinse solution tubings, 38--waste rinse solution container,

DETAILED DESCRITION

A detailed description of one preferred embodiment embodying the present invention will now... ...of a viral strain such as HPV, HCV, or HIV, and may identify the infected location of viruses. The sample 1 may include for example an anatomy section, cultured cell, or...the biological sample holder unit 2 as the referential end, or which marks any given location in the vicinity of the examination area R by means of a fluorescent bead and... ...When there is observed fluorescence from the biological sample 1 during the primary screening, the location of fluorescence is recorded by the controller unit 3-6 to use as the reference... ...stage 3-5 is driven to move the

biological sample holder unit 2 until the location of fluorescence observed at the time of imaging the fluorescent image described above (reference measurement... ..to the probe DNA is emitted intranuclear or extranuclear, or whether the fluorescence comes from location intracellular or extracellular. More specifically, it is preferable for the resolution of transmission light images to set to 2 to 20 times of the resolution of fluorescent images.

Thereafter, the fluorescent image stored in the fluorescent image... ..negative result based on the detection of fluorescence but also for more specific determination of location of fluorescence. In particular, the optical measurement apparatus images the transmission light image at a higher resolution than the fluorescent image. In such a case the location of emitted fluorescence can be identified with utmost preciseness.

Also in this embodiment the fluorescent... ..for a transmission light image to be imaged so as to include at least the location of detected fluorescence. In other words, an entire cell to be examined may not need... ..rinse.

The staining solution sprayer unit 22 is connected to a group of stain solution containers 26 through stain solution tubings 36. One end of the stain solution tubings 36 is... ..stain solution tubings 36 between the staining solution sprayer unit 22 and the stain solution containers 26 have a stain solution feeder pump 32 and an electromagnetic valve 29. The stain solution tubings 36 between the solution collecting unit 23 and the stain solution containers 26 may have a stain solution feeder pump 33 and electromagnetic valves 28 (28-1... ..Similarly, the rinse solution sprayer unit 24 is connected to a group of rinse solution containers 27 through rinse solution tubings 37. The waste outlet of the rinse collecting unit 25 is connected to a waste rinse solution container 38 through a rinse solution tubings 37. The rinse solution tubings 37 between the rinse solution sprayer unit 24 and the rinse solution containers 27 may have a rinse solution feeder pump 34 and an electromagnetic valve 31. The rinse solution tubings 37 between the rinse collecting unit 25 and the waste rinse solution container 38 may have a rinse solution feeder pump 35 and electromagnetic valves 30 (30-1, 30-2, 30-3, 30-4).

The stain solution containers 26 may comprise, for example as shown in Fig. 7, a stain A container 26-1, a stain B container 26-2, a clearing solution container 26-3, a tubing cleaning solution container 26-4. In other words, the stain solution containers 26 comprises a plurality of containers each stores separately a reagent required for staining for imaging the transmission light image of... ..rinse solution for washing the stain solution tubings 36. The communication from the stain A container 26-1, the stain B container 26-2, the clearing solution container 26-3, the tubing cleaning solution container 26-4 to the stain solution tubings 36 is controlled by the electromagnetic valves 28... ..4 provided in the middle of the stain solution tubings 36, respectively.

The rinse solution containers 27 comprise, as shown in Fig. 7, a rinse solution container 27-1, a fractioning solution container 27-2, an affinity solution A container 27-3, and an affinity solution B container 27-4. In other words, the rinse solution containers 27 comprise a plurality of containers each storing separately a reagent necessary for rinsing, fractioning, and affinity treatment after staining. The communication of rinse solution container 27-1, the fractioning solution container 27-2, the affinity solution A container 27-3, and the affinity solution B container 27-4 with the rinse solution tubings 37 is controlled by the electromagnetic valves 30... ..middle of the rinse solution tubings 37, respectively. The communication with the waste rinse solution container 38 is controlled by the electromagnetic valve 31.

The optical measurement apparatus configured as have... ..into the sample staining unit 21.

Next, haematoxylin stain solution supplied from the stain A container 26-1 is sprayed onto the biological sample 1 through the staining solution sprayer unit... ..solution is supplied to spray without being mixed with other staining solutions contained in other containers than the stain A container 26-1, and thus sprayed haematoxylin solution can be collected to the solution collecting unit 23. Collected haematoxylin solution is pumped up to the stain A container 26-1 to reuse.

Next, the biological sample holder unit 2 is moved to the... ..the figure to rinse the sample I with distilled water supplied from the rinse solution container 26-1 through the rinse solution sprayer unit 24 for about five minutes to

wash... ..distilled water is supplied to spray without being mixed with other solutions contained in other containers than the rinse solution container 26-1, and thus supplied distilled water can be collected to the waste rinse solution container 38 through the rinse collecting unit 25.

During rinse described above, the valves 28-1... ..rinse solution collection pump 35. In this manner distilled water from the tubing cleaning solution container 26-4 may be supplied to the staining solution sprayer unit 22 and to stain... ..a mixture of 0.2 % hydrochloric acid and 70 % alcohol supplied from the fractioning solution container 27-2 is supplied to the sample 1 through the rinse solution sprayer unit 24... ..treatment is carried out by spraying 95 % alcohol solution supplied from the affinity solution A container 27-3 to the biological sample 1. During affinity treatment, the valves 28-3 and... ..shown in the figure, to spray eosin - phloxin B mixture supplied from the stain B container 26-2 for seven minutes for staining. When spraying eosin - phloxin B mixture the valves... ..phloxin B mixture is sprayed without being mixed with any other solutions contained in other containers than the stain B container 26-2, and thus sprayed eosin - phloxin B mixture can be collected through the solution collecting unit 23. Collected eosin - phloxin B mixture is pumped up to the stain B container 26-2 to reuse.

Next, the biological sample holder unit 2 is moved to the... ..the biological sample 1, and then the absolute alcohol supplied from the affinity solution B container 27-4 is sprayed thereto to fractionation and dehydration. During this fractionation and dehydration, the... ..not shown in the figure to lucidify by spraying xylol supplied from the clearing solution container 26-3 to the biological sample 1. During lucidification only the valves 28-3 and...and a corresponding transmission light image derived from a sample to facilitate detection of accurate location of fluorescence or luminance in a given area on the sample.

Claims: ...resolution of said transmission light image is in the range of from twice to twenty times of the resolution of said fluorescent or luminescence image.

4. A method of optical measurement...

9/K/3 (Item 3 from file: 348)

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Country	Number	Kind	Date
Type	Pub. Date	Kind	Text
...Date of request for examination... ..Date of dispatch of the first examination report	19		
Available Text	Language	Update	Word Count
Total Word Count (Document A)			
Total Word Count (Document B)			
Total Word Count (All Documents)			

Specification: ...e-mail is sent between mobile stations in accordance with a protocol predetermined by a carrier.

Fig. 1 is a diagram showing a configuration of a mobile-communications network system connected... ..sender's mobile station, mail server SV stores it and then sends it to a destination mobile station in accordance with a predetermined protocol.

Fig. 2 is a block diagram showing... ..orthogonal modulation, such as a QPSK modulation, on the compressed voice data to obtain a carrier wave signal. Then, CDMA unit 6 performs spectrum spread processing on this orthogonal modulated carrier wave signal using a spread code, such as a PN code, which is unique to... ..explained in this embodiment. The user of mobile station MS1 inputs information, such as a destination address (namely, the address of mobile station MS2), and a title of the e-mail... ..receiving the e-mail, mail server SV calls mobile station MS2 in accordance with the destination address in the header and sends the e-mail to mobile station MS2.

On the... ..explained in this embodiment. The user of mobile station MS1 inputs information, such as a destination address (namely, the address of mobile station MS2), and a title of the e-mail... ..receiving the e-mail, mail server SV calls mobile station MS2 in accordance with the destination address in its header and sends the e-mail to mobile station MS2.

On the... ..for a user to answer an e-mail without making an error in inputting a destination address.

Also, when displaying the received address, the mobile station may show a message that... ..for a user to answer an e-mail using the corrected address without inputting a destination address.

Further, a received address may be regarded to be originally the same as a...

Specification: ...e-mail is sent between mobile stations in accordance with a protocol predetermined by a carrier.

Fig. 1 is a diagram showing a configuration of a mobile-communications network system connected... ..sender's mobile station, mail server SV stores it and then sends it to a destination mobile station in accordance with a predetermined protocol.

Fig. 2 is a block diagram showing... ..orthogonal modulation, such as a QPSK modulation, on the compressed voice data to obtain a carrier wave signal. Then, CDMA unit 6 performs spectrum spread processing on this orthogonal modulated carrier wave signal using a spread code, such as a PN code, which is unique to... ..explained in this embodiment. The user of mobile station MS1 inputs information, such as a destination address (namely, the address of mobile station MS2), and a title of the e-mail... ..receiving the e-mail, mail server SV calls mobile station MS2 in accordance with the destination address in the header and sends the e-mail to mobile station MS2.

On the... ..explained in this embodiment. The user of mobile station MS1 inputs information, such as a destination address (namely, the address of mobile station MS2), and a title of the e-mail... ..receiving the e-mail, mail server SV calls mobile station MS2 in accordance with the destination address in its header and sends the e-mail to mobile station MS2.

On the... ..for a user to answer an e-mail without making an error in inputting a destination address.

Also, when displaying the received address, the mobile station may show a message that... ..for a user to answer an e-mail using the corrected address without inputting a destination address.

Further, a received address may be regarded to be originally the same as a...

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Country	Number	Kind	Date
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Abstract ...A1

Type	Pub. Date	Kind	Text
...Date of request for examination	19		
Available Text	Language	Update	Word Count
Total Word Count (Document A)			
Total Word Count (Document B)			
Total Word Count (All Documents)			

Specification: ...invention relates to a packaging material suitable as a substrate for packaging bags or packaging containers employed for heat treatment, for example, in a microwave oven, of processed food or various...of claims 1 to 4, which comprises a cover provided with an excess portion, a container having the cover affixed thereto with a heat seal, and a flap in which the excess portion dangles from the upper end of the container, wherein the end portion of the flap is adhesively bonded to the container. Bonding of the flap to the container may be conducted at the side surface of the container or at the bottom surface thereof. A heat seal or an adhesive is used for... ...6 relates to a packaged product in which processed food, various foods, medical instruments or containers are airtight sealed with the packaging material described in any one of claims 1 to... ...in which the material of the invention described in claim 5 is employed as a container cover;

FIG. 21 is a perspective view illustrating an example of a packaging container using the invention of claim 6; and

FIG. 22 is a cross-sectional view along... ...lateral pillow-type automatic packaging machine, food products 17 are wrapped up to obtain cylindrical packages in a packaging unit 18 and continuously heat sealed at the back portion. Then, the bags or containers of the ...prepared as a hot product without being excessively dried unlike the packaged products using other containers.

2) Since the appropriate steaming proceeded inside the thermally insulating material, the contents were prepared... ...dissipation and thereby exhibited an excellent temperature elevation effect.

Example 4 (embodiment relating to a container cover)

A heat-resistant container 20 made of a polypropylene resin and having a shape with a width of 115... ...was performed stably without any boil-over. The heating was halted after 90 seconds, the container 20 was taken out, and it was confirmed that the hotchpotch had been sufficiently heated.

Example 5 (embodiment relating to a packaging material having a flap)

A heat-resistant container 20 made of a polypropylene resin and having a shape with a width of 115... ...flap (c). The flap (c) was bonded with an adhesive 22 to side surfaces of container 20, as shown in FIG. 22. Printing was conducted over the entire surface of the... ...was 147.2 cm²), and the printing surface area on the side surface of the

container was 102.4 cm²). Therefore, the total surface area of printing was 249.6 cm²... ..the product information can be placed not only on the cover portion of the packaging container but also on the body thereof.

The invention of claim 6 provides a packaged product...

Specification: ...invention relates to a packaging material suitable as a substrate for packaging bags or packaging containers employed for heat treatment, for example, in a microwave oven, of processed food or various... ..outside.

<PATCIT ID=PCIT0001 DNUM=US5241150A> US 5,241,150 </PATCIT> discloses a microwave food package having a chamber for receipt of a foodstuff. An orifice is formed in the package for dispensing the foodstuff in a flowable state after heating in a microwave oven. The package is insulated to permit handling of the package immediately after heating of the foodstuff.

DISCLOSURE OF THE INVENTION

The following problems were associated... ..of claims 1 to 3, which comprises a cover provided with an excess portion, a container having the cover affixed thereto with a heat seal, and a flap in which the excess portion dangles from the upper end of the container, wherein the end portion of the flap is adhesively bonded to the container. Bonding of the flap to the container may be conducted at the side surface of the container or at the bottom surface thereof. A heat seal or an adhesive is used for... ..5 relates to a packaged product in which processed food, various foods, medical instruments or containers are airtight sealed with the packaging material described in any one of claims 1 to... ..in which the material of the invention described in claim 4 is employed as a container cover;

<FIGREF IDREF=F0021>FIG. 21</FIGREF> is a perspective view illustrating an example of a packaging container using the invention of claim 5; and

<FIGREF IDREF=F0022>FIG. 22</FIGREF> is a...lateral pillow-type automatic packaging machine, food products 17 are wrapped up to obtain cylindrical packages in a packaging unit 18 and continuously heat sealed at the back portion. Then, the... ..are presented in Table 4.

Then, commercial potatoes were placed in the packaging bags or containers of the above-described three types and packaged products were obtained. The packaged products were... ..prepared as a hot product without being excessively dried unlike the packaged products using other containers.

2. 2) Since the appropriate steaming proceeded inside the thermally insulating material, the contents were... ..dissipation and thereby exhibited an excellent temperature elevation effect.

Example 4 (embodiment relating to a container cover)

A heat-resistant container 20 made of a polypropylene resin and having a shape with a width of 115... ..was performed stably without any boil-over. The heating was halted after 90 seconds, the container 20 was taken out, and it was confirmed that the hotchpotch had been sufficiently heated.

Example 5 (embodiment relating to a packaging material having a flap)

A heat-resistant container 20 made of a polypropylene resin and having a shape with a width of 115... ..flap (c). The flap (c) was bonded with an adhesive 22 to side surfaces of container 20, as shown in <FIGREF IDREF=F0022>FIG. 22</FIGREF>. Printing was conducted over the... ..was 147.2 cm²)), and the printing surface area on the side surface of the container was 102.4 cm²)). Therefore, the total surface area of printing was 249.6 cm²... ..the product information can be placed not only on the cover portion of the packaging container but also on the body thereof.

The invention of claim 5 provides a packaged product...

Claims: ...any one of claims 1 to 4 and provided with an excess portion and a container onto an opening of which the cover is heat-sealed, in which the cover has a larger area than an area of the opening of the container and the

excess portion of the cover dangles from the upper end of the container and is adhesively bonded to the container at the end portion thereof.

6. A packaged product in which processed food, various food products, various foodstuffs, medical instruments, or containers are tightly sealed with the packaging material according to any one of claims 1 to...

Claims: ...one of claims 1 to 3 and provided with an excess portion (c) and a container (20) onto an opening of which the cover (19, 21) is heat-sealed, in which... ...cover (19, 21) has a larger area than an area of the opening of the container (20) and the excess portion (c) of the cover (19, 21) dangles from the upper end of the container (20) and is adhesively bonded to the container (20) at the end portion thereof.

5. A packaged product in which processed food, various food products, various foodstuffs, medical instruments, or containers are tightly sealed with the packaging material according to any one of claims 1 to...

9/K/5 (Item 5 from file: 348)

EUROPEAN PATENTS

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Country	Number	Kind	Date	
Type	Pub. Date	Kind	Text	
...Date of request for examination... ...Date of drawing up and dispatch of supplementary:search report... ...Date of drawing up and dispatch of supplementary:search report... ...Date of dispatch of the first examination report	19			
Available Text	Language	Update	Word Count	
Total Word Count (Document A)				
Total Word Count (Document B)				
Total Word Count (All Documents)				

Specification: ...is removed, and the face side coated with the adhesive is stuck to its intended location to seal the bag. When the contents are put in and taken out of this...Once peeled, the elasticity of the adhesive sections causes them to return to their original locations down inside the protective material, and they will therefore not adhere if merely touched.

FIG...FIG. 12, and after complete sealing the bags are distributed among ordinary consumers. When the package contents are put in, this partially covered adhesive tape is not sticky on its surface...

9/K/6 (Item 6 from file: 348)

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PACKAGE OF CYLINDRICAL ARTICLE AND PRODUCTION METHOD THEREFOR

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Country	Number	Kind	Date
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Abstract ...A1

Type	Pub. Date	Kind	Text
...Date of request for examination	19		
Available Text	Language	Update	Word Count
Total Word Count (Document A)			
Total Word Count (Document B)			
Total Word Count (All Documents)			

Specification: ...A1

Technical Field

The present invention relates to a package containing a plurality of cylindrical articles such as batteries, and a method of fabricating the same.

Background Art

Heretofore, various packages for cylindrical articles have been devised and commercialized. In particular, perforations, slits, or the like... ..and to identify that the wrapped cylindrical articles are unused (virginity).

For example, a conventional package is fabricated by wrapping a plurality of articles in a heat-shrinkable film, and heat-shrinking the heat-shrinkable film. In this kind of package, for easy removal of an article to be wrapped, a perforation (opening means) that breaks... ..between the film and the wrapped articles.

In the conventional method for fabricating such a package, there are two main methods: one is to form a perforation in the heat-shrinkable... ..A further problem is that the perforation may be deformed by heating, resulting in decreased package strength or variations in strength from package to package. On the other hand, the latter method has involved the problem that the cylindrical articles may be scratched.

For example, Japanese Unexamined Patent Publication No. Hei 8-122981 discloses a package in which a plurality of cylindrical articles (magazines containing photographic sensitive materials), each packaged in... ..moisture-proof case.

Further, Japanese Unexamined Utility Model Publication No. Hei 6-37175 discloses a package which is fabricated by wrapping a plurality of articles to be wrapped in a heat-shrinkable film, and heat-shrinking the heat-shrinkable film. In this package, for easy removal of an article to be wrapped, a perforation (unwrapping means) that breaks... ..is located in the space between the film and the wrapped articles.

However, in these packages, since the entire set of cylindrical articles is wrapped in a heat-shrunk film, the... ..the remaining articles wrapped to retain their unused state (the so-called virginity).

Such a package capable of securing the virginity of each individual cylindrical article is disclosed, for example, in Japanese Unexamined Utility Model Publication No. Sho 52-64680. This package uses a heat-shrinkable film tube of a synthesized resin. The film tube is formed... ..parallel, and then the film tube is heat-shrunk to complete the fabrication of the package.

However, since a heat-shrinkable film tube, in general, is thin and lacks rigidity, if... ..or folds may be produced in the film tube, impairing the aesthetic appearance of the package. Furthermore, since the slit portions of the film are in the so-called idle state... ..the method of the above publications, it has not been possible to reliably obtain a package capable of ensuring the virginity of each individual cylindrical article.

Also in these days, it is desired to increase the number of batteries that can be packed in such a package, but if many batteries are packed in one package, all the batteries will come out separated upon opening the package, which inconveniences the consumer.

To address this problem, it has been practiced to employ a... ..method generally known as the double shrink packing method in which a plurality of unit packages, each containing a plurality of batteries, are arranged and wrapped together in a second heat-shrinkable film (outer film). In one example, such a composite package is fabricated by arranging three unit packages in parallel, each containing four batteries, and wrapping them together in a second heat-shrinkable film.

However, since the total weight of the plurality of unit packages is considerably high, high strength is required for the second heat-shrinkable film to fix and retain them. This gives rise to the problem that the package is difficult to be opened because a relatively strong force is needed to open the package containing the plurality of unit packages.

In view of the above-outlined problems, it is an object of the present invention to provide a package for a plurality of cylindrical articles, capable of removing each cylindrical article individually and retaining object of the present invention to provide a package for cylindrical articles and a method of fabricating the same, in which a slit can... ..cylindrical articles as well as in the upper end and lower end faces of the package without scratching or nicking the cylindrical articles.

It is a further object of the present invention to provide a package (double shrink package) fabricated using the above so-called double shrink packing method, in which the package permits each individual unit package to be removed by easily breaking the outer film while reliably and stably maintaining the fixed and retained state of the unit package.

Disclosure of Invention

The present invention relates to a package for cylindrical articles, fabricated by wrapping a plurality of cylindrical articles assembled in parallel in... ..on at least either one of an upper end and lower end faces of the package corresponding to an upper end and a lower end of the cylindrical articles and in... ..between the adjacent cylindrical articles.

The invention also relates to a method of fabricating a package for cylindrical articles, the package being fabricated by wrapping a plurality of cylindrical articles assembled in parallel in a heat... ..shrinkable film located on an upper end face and/or lower end face of the package corresponding to the upper end and/or lower end of the cylindrical articles, and thereby... ..of forming a perforation in the heat-shrinkable film located on a side of the package, in

which the cylindrical articles assembled in parallel are packed, along the boundary between the... ..film located in outermost portions of the upper end and lower end faces of the package along the boundary between the adjacent cylindrical articles.

Further, it is effective that the slit... ..step (b) and the step (c) are performed simultaneously.

The invention also relates to a package for cylindrical articles, fabricated by wrapping a plurality of cylindrical articles assembled in parallel in... ..and retain the articles, wherein the film has a slit on a side of the package along a boundary between the adjacent articles, and is curved in such a manner as... ..cylindrical articles located adjacent to the boundary.

In this case, it is effective that the package includes an adhesive layer formed at least on inner surface of the film on a... ..is effective that the slit is formed in the film on each side of the package.

Further, it is effective that the layer of the slit is dimensioned within a prescribed range determined so that each individual cylindrical article does not fall out of the package even when the package is dropped.

Further, it is effective that the package includes a perforation that connects the slit formed on one side of the package to the slit formed on the other side of the package.

Further, it is effective that the slit is formed in the film on one side of the package, and a perforation connecting both ends of the slit is formed in the film on the other side of the package.

Further, it is effective that the film is in the form of a sheet, and... ..wrap the articles together, and the welded portion is positioned on one side of the package.

Further, it is effective that the film is in the form of a tube.

The invention also relates to a method of fabricating a package for cylindrical articles, the package being fabricated by wrapping a plurality of cylindrical articles assembled in parallel in a heat... ..and retain the articles, wherein the film has a slit on a side of the package along a boundary between the adjacent articles, and is curved in such a manner as... ..circumferential surfaces of the adjacent cylindrical articles.

The invention further relates to a composite battery package in which a plurality of unit packages, each fixing and retaining a plurality of batteries assembled in a parallel in a first a portion thereof corresponding to an end portion of a boundary between the packages.

In this composite battery package, it is effective that the pore is provided at each end portion of the boundary on each side of the package.

Also, it is effective that the first heat-shrinkable film has a higher melting point... ..in accordance with the present invention.

Fig. 2 is a top plan view of a package provided with slits in Fig. 1.

Fig. 3 is a schematic perspective view of a... ..is a schematic diagram for explaining the steps of forming perforations and slits in a package fabrication method in accordance with the present invention.

Fig. 11 is another schematic diagram for explaining the steps of forming perforations and slits in the package fabrication method in accordance with the present invention.

Fig. 12 is a schematic perspective view of a package for cylindrical articles, according to one embodiment of the present invention.

Fig. 13 is a... ..X-Y in Fig. 12.

Fig. 14 is a schematic perspective view of a conventional package fabricated by wrapping cylindrical articles in a heat-shrinkable film.

Fig. 15 is a schematic... along the line P-Q in Fig. 14.

Fig. 16 is a diagram showing a package structure in which, in the conventional package of Fig. 15, an opening, such as a slit or perforation, is provided in the... each boundary between the cylindrical articles.

Fig. 17 is a schematic perspective view of a package for cylindrical articles, according to another embodiment of the present invention.

Fig. 18 shows a process diagram illustrating a package fabrication method in accordance with the present invention.

Fig. 19 is a schematic perspective view... used in the present invention.

Fig. 29 is a schematic perspective view of a unit package in the present invention.

Fig. 30 is a schematic perspective view of a package

containing a plurality of unit packages.

Fig. 31 is a schematic perspective view of a package in accordance with the present invention.

Fig. 32 is a schematic perspective view illustrating a method of opening the package of the present invention shown in Fig. 31.

Fig. 33 is a schematic perspective view of another package in accordance with the present invention.

Fig. 34 is a schematic perspective view of still another package in accordance with the present invention.

Fig. 35 is a schematic perspective view illustrating a method of opening the package of the present invention shown in Fig. 34.

Best Mode for Carrying Out the Invention... described in detail below.

Embodiment 1

Embodiment 1 of the present invention relates to a package for cylindrical articles, fabricated by wrapping a plurality of cylindrical articles assembled in parallel in... least either one of an upper end face and a lower end face of the package corresponding to upper end and lower end faces of the adjacent cylindrical articles.

To resolve the earlier described problems, the present invention provides a method of fabricating a package for cylindrical articles, the package being fabricated by wrapping a plurality of cylindrical articles assembled in parallel in a heat... the heat-shrinkable film located on the upper end and lower end faces of the package, and thereby forming slits in the heat-shrinkable film located on the upper end and a perforation in the method of fabricating the package for cylindrical articles, the present invention employs a method of forming a perforation in the... used to form the slits on the upper end and lower end faces of the package without scratching the cylindrical articles.

The fabrication method in accordance with the present invention will... with the blade having such a special shape.

In the present invention, a cylindrical article package yet to be provided with a perforation or a slit is produced first. The method of producing this package is not specifically limited, but for example, an entire set of cylindrical articles assembled in... PET) film, and then the film is heat-shrunk around the articles to form a package in which the cylindrical articles are fixed and retained.

Next, in the package fabrication method of the invention, as shown in Fig. 1, a cutting jig 5 is... the heat-shrunk film located on the upper end and lower end faces of a package 1 along a boundary 4 between adjacent cylindrical articles 2 and 3. Fig. 1 is... the heat-shrunk film located on the upper end and lower end faces of the package. Fig. 2 shows a top plan view of the package 1 provided with the slits 6.

V-shaped or U-shaped cutting jigs 5 with... sharpened cutting edges is moved up and down on the upper end face of the package, as shown in Fig. 1, the V-shaped blade 5a cuts into the film from... into the film. Further, since, in the upper end or lower end face of the package, each cutting edge moves in such a manner as to slide from the outside toward... and lower end faces can be varied as desired according to the strength of the package by appropriately controlling the position of the cutting jig 5 to be moved up and down on the package.

Further, when the blade 5a having double-sided sharpened edges is used, the sides of... should be determined appropriately according to the dimensions of the cylindrical articles contained in the package (in the case of dry batteries, the battery size).

A U-shaped cutting jig having... is a front view showing a U-shaped cutting jig in such an example.

The package fabrication method of the present invention preferably comprises a step (b) of forming a perforation in the heat-shrunk film located on a side of the package along the boundary between the adjacent cylindrical articles.

The most remarkable feature of the invention... forming method described above, but for easy separation of each individual cylindrical article from the package, it is preferable to provide a perforation on the side of the package along the boundary between the adjacent cylindrical articles, and this is because the perforation permits... separation, the virginity-proving film wrapped around each of the individual cylindrical articles forming the package.

The perforation forming method is not specifically limited, and any conventionally known method can be... heat-shrunk film in the outermost portions of the upper and lower ends of the package at the boundary between the adjacent cylindrical articles (step (c)).

Although the details will be... can be shortened by performing the steps (b) and (c) simultaneously.

In the following, the package fabrication method in accordance with the present invention will be described concretely with reference to specific examples, but it is not limited thereto.

Example 1

A package containing two D size dry batteries was produced by wrapping the two dry batteries in... is a schematic diagram for explaining the steps of forming perforations and slits in the package fabrication method in accordance with the present invention.

First, as shown in part (1) of... 10, first perforating jigs 7 and 7' were brought close to the sides of the package 1 containing the two dry batteries, and perforations 9 were formed along the boundary between the adjacent dry batteries contained in the package 1. The perforating jigs 7 and 7' have comb-like teeth 7a with which the perforations 9 are formed in the heat-shrunk film on the respective sides of the package 1. The size and pitch of the teeth were determined so that the perforations would not break and each individual cylindrical article would not be released when the package was dropped on the ground.

At the same time, as shown in part (1) of... and 8' were brought close to the upper end and lower end faces of the package 1 at the boundary between the adjacent dry batteries 2 and 3, and perforations were... perforations in the outermost portions of the upper end and lower end faces of the package at the boundary between the adjacent dry batteries. In particular, to prevent the dry batteries... the heat-shrunk film located on the upper end and lower end faces of the package at the boundary between the adjacent... respectively contacting batteries (see part (3) of Fig. 10).

Example 2

In this example, a package containing four AA size dry batteries was produced by wrapping the four dry batteries assembled... is a schematic diagram for explaining the steps of forming perforations and slits in the package fabrication method in accordance with the present invention.

First, as shown in part (1) of... 11, first perforating jigs 7 and 7' were brought close to the sides of the package 1 containing the four dry batteries, and as shown in part (2) of Fig. 11, perforations 9 were formed along the boundaries between the adjacent dry batteries contained in the package 1. Here, since four dry batteries were packaged, there were three boundaries; therefore, three perforating... perforations 9 are formed in the heat-shrunk film on the respective sides of the package 1. The size and pitch of the teeth were determined so that the perforations would not break and each individual cylindrical article would not be released when the package was dropped.

Next, as shown in part (2) of Fig. 11, cutting jigs 5 each... the heat-shrunk film located at the upper end and lower end faces of the package at the boundaries between the adjacent dry batteries, and slits were formed in the heat... 3) of Fig. 11).

Embodiment 2

Embodiment 2 of the present invention relates to a package for cylindrical articles, fabricated by wrapping a plurality of cylindrical articles assembled in parallel in... and retain the articles, wherein the film has a slit on a side of the package along a boundary between adjacent ones of the articles, the film around the slit being... shrunk to fix and retain the articles to complete the fabrication of the cylindrical article package. The most remarkable feature of this embodiment is that the film has a slit on a side of the package along the boundary between adjacent ones of the articles, and is curved in such a... to the outer circumferential surfaces of the cylindrical articles located adjacent to the boundary.

A package for cylindrical articles and a fabrication method for the same in accordance with the present... below with reference to relevant drawings.

Fig. 12 shows a schematic perspective view of a package for cylindrical articles, according to one embodiment of the present invention. More specifically, Fig. 12 is a schematic perspective view of a package 13, which is fabricated by wrapping a plurality (in this example, four pieces) of cylindrical... the film around the articles. The cylindrical articles 11 are fixed and retained in the package 13.

Next, Fig. 13 shows a schematic cross sectional view taken along the line X-Y in Fig. 12. As shown in Fig. 13, in the package 13 in accordance with the present invention, the heat-shrunk film 12 has a slit... 11 located adjacent to the boundary 14.

Herein, a schematic perspective view of a conventional package fabricated by wrapping cylindrical articles in a heat-shrinkable film is shown in Fig. 14... in Fig. 14 is shown in Fig. 15.

As shown in Fig. 14, the conventional package 13 does not have the slit that constitutes the feature of the present invention, and... present in each boundary portion 14, as shown in Fig. 15.

Fig. 16 shows a package structure in which, in the conventional package 13 of Fig. 15, an opening 16 such as a slit or perforation is simply... heat-shrunk film 12 located at each boundary 14 between the cylindrical articles 11. The package shown in Fig. 16 is proposed to ensure the virginity of each individual cylindrical article... this gap 17 prevents the cylindrical articles 11 from being fixed and retained in the package with high reliability.

By contrast, in the present invention, no such gaps 17 are formed... 15 may be provided in the heat-shrunk film 12 on one side of the

package 13 or on both sides thereof. When providing the slits on both sides, the area... ..prescribed range determined so that the cylindrical articles 11 would not fall out of the package 13 during normal handling of the package 13. In particular, it is preferable to dimension the slits so that the cylindrical articles 11 would not fall out of the package 13 even when the package 13 is dropped.

Herein, it is preferable that an adhesive layer is provided at least... ..or from gradually returning to the original shape over time. As a result, in the package comprising the cylindrical articles retained in the heat-shrunk film, the stress applied to perforated... ..amide wax, paraffin wax, epoxy resin, and dicyclohexyl phthalate can be preferably used.

In the package 13 of the present invention, it is preferable to form a perforation 18 for connecting... ..of the perforation 18, each individual cylindrical article 11 can be easily removed from the package 13. Furthermore, when removing one cylindrical article 11, it is possible to prevent unnecessary force... ..remaining cylindrical articles 11, thus ensuring that the articles remain fixed and retained in the package.

Further, when the slit 15 is formed in the heat-shrunk film 12 on one side of the package 13, it is preferable to form a perforation on the other side in such a... ..a range determined so that the cylindrical articles 11 would not fall out of the package 13 during normal handling of the package 13. As previously described, it is particularly preferable to determine the dimensions so that the individual cylindrical articles 11 would not fall out of the package 13 even when the package 13 is dropped.

The heat-shrinkable film before the production of the package of the invention may be supplied in the form of a sheet or a tube... ..wrap the cylindrical articles. Generally, the welded portion is positioned at the bottom of the package.

In the present invention, on the other hand, the welded portion may be positioned on one side of the package. This is shown in Fig. 17. Fig. 17 is a schematic perspective view of another example of the package 13 of the invention shown in Fig. 12; in this example, the welded portion 19 is positioned on one side of the package 13.

Next, a method of fabricating the package according to Embodiment 2 of the present invention will be described. The package fabrication method comprises the steps of: (A) forming the slit and perforation in the heat...heat-shrinkable film is processed in advance

Fig. 18 shows a process diagram illustrating the package fabrication method of the present invention.

In this example, a sheet-like heat-shrinkable film... ..is one example of the invention, and the invention is not limited thereto.

In the package fabrication method of the present invention shown in Fig. 18. the heat-shrinkable film 12... ..located at designated positions corresponding to the boundaries between the cylindrical articles wrapped in the package.

The slits and perforations can also be formed using a laser or various cutters described... ..is relatively difficult to form a perforation especially in the lower end face of the package corresponding to the bottom side of the cylindrical articles. However, the perforation in the lower... ..a special perforating die may be used. Perforations can also be formed by sandwiching the package from both sides of the cylindrical articles by means of a pair of dies; the... ..air method

In this method, the step (E) is performed by passing the cylindrical article package with the slits and perforations formed therein through an oven capable of generating hot air... ..the step (E) is performed by heating a die having a shape the fits the package containing the cylindrical articles, and by sandwiching the package with the die.

Fig. 21 shows a schematic perspective view of the heated die used... ..recess 31 and a slit forming protrusion 32; the structure is such that when the package is sandwiched from both sides thereof as shown in Fig. 22, the slit portions of...designed to cut into the boundary portions between the respective adjacent cylindrical articles in the package,

thereby forming a slit in the boundary portion while, at the same time, causing the slit portion to curve, when the package is sandwiched under pressure.

Examples of the material forming the heated die 30 include a... ..the heated die 30 is heated using a heat source such as a heater.

The package for cylindrical articles in accordance with the present invention can be fabricated as described above... ..can be formed by pressing the cutter 40 against the heat-shrinkable film of the package.

In the case of the cutter 40 shown in Fig. 24, the perforating blade 41... ..can be formed by pressing the cutter 40 against the heat-shrinkable film of the package.

In the case of the cutters 40 shown in Figs. 25 and 26, the slits... ..heat-shrinkable film.

In this case, the cutter 40 may be moved while fixing the package, or the package may be moved while fixing the cutter. However, when sliding the cutter, the cutter height... ..die shown in Fig. 28 has recesses for holding cylindrical articles, and by sandwiching the package as shown in Fig. 22, slits and perforations can be formed in the heat-shrinkable film of the package by means of the slit forming blades 51 and perforating blades 52.

Using this die... ..itself.

When forming slits and perforations in the film already heat-shrunk to form a package, it is relatively difficult to form perforations in the upper end and lower end of the package corresponding to the upper and lower ends of the cylindrical articles packed therein. The perforations controlling the motion of the various cutters described above, but by sandwiching the package from the top and bottom and from the front and back by means of respective... ..a manner as to conform to the outer circumferential surfaces of the cylindrical articles.

The package for cylindrical articles in accordance with the present invention can be fabricated as described above.

The method of fabricating the cylindrical article package according to Embodiment 2 of the present invention has been described above, but it will... ..according to the shape of the heat-shrinkable film used as the material, the existing package fabrication equipment, the cost of fabrication, the kinds of available technical means and the like... ..before the curving step (E) in the fabrication process.

Next, a set of cylindrical article package will be described.

These days, cylindrical article packages fabricated as described above in accordance with the present invention may often be sold in... ..can be said that a demand exists for packaged sets containing a plurality of such packages.

In view of this, the present invention also provides a packaged set containing a plurality of packages each retaining therein one or a plurality of cylindrical articles, the packaged set being fabricated by wrapping a set of the plurality of packages in a second heat-shrinkable film and by heat-shrinking the second heat-shrinkable film around the set of the packages. The method of fabricating the packaged set by wrapping the plurality of packages in the second heat-shrinkable film and by heat-shrinking the film around the set of the packages can be carried out in fundamentally the same way as the method of fabricating the package for the plurality of cylindrical articles described above.

Accordingly, for the second heat-shrinkable film, it is also preferable to form a slit in the boundary portion between adjacent packages.

It is also possible to produce a packaged set of cylindrical article packages by blister-packing the set of the packages each retaining therein one or a plurality of cylindrical articles.

The blister pack can be fabricated using a conventionally known method. For example, the plurality of cylindrical article packages are placed on a backing sheet, and covered with a transparent plastic cover having a recess shaped to fit the outer shape of the packages. Then, the peripheral portion of the plastic cover is bonded to the sheet.

It is also possible to produce a packaged set of cylindrical article packages by skin-packing the set of the packages each retaining therein one or a plurality of cylindrical articles.

The skin pack can also... cover film made of a transparent thermoplastic resin is placed over the set of the packages arranged on a backing sheet having a large number of micro through-holes passing therethrough, and the whole set of packages is vacuumed from behind the sheet while heating the cover film.

Embodiment 3

Embodiment 3 of the present invention relates to a composite package in which a plurality of packages, each fixing and retaining a plurality of batteries assembled in parallel in a first heat-shrinkable film in a portion thereof corresponding to an end portion of a boundary between the packages.

The inventors have conducted extensive studies on double shrink packages and have found that the problems associated with the prior art can be solved by employing the above structure.

More specifically, in accordance with the present invention, in a package in which a plurality of unit packages, each fixing and retaining a plurality of batteries assembled in parallel in a first heat-shrinkable film in a portion thereof corresponding to an end portion of the boundary between the unit packages.

Because of the presence of this pore, when the package is bent or twisted, the second heat-shrinkable film is easily torn out starting at the pore. The invention thus provides the effect of permitting easy opening of the package.

Here, the pore is formed in an end portion of the boundary because when opening the package by twisting it, shearing force tends to be applied to the pore in a linear line, making the second heat-shrinkable film easier to tear out.

Also, when opening the package by just bending it, since the second heat-shrinkable film is curved in a portion... is to be formed is determined according to the dimensions of the batteries in the package.

The composite package according to Embodiment 3 of the present invention will be described below with reference to relevant drawings.

Fig. 29 is a schematic perspective view of a unit package. The unit package 61 shown in Fig. 29 is fabricated by assembling four cylindrical batteries 62 in parallel in a first heat-shrinkable film 63, and heat-shrinking the film to form a package. At this time, in the first heat-shrinkable film wrapped around the unit package, a perforation may be formed for each battery as previously described.

The unit package in the present embodiment may be the same as the package described in the above Embodiments 1 and 2.

That is, the unit package may be the one fabricated by wrapping a plurality of cylindrical articles assembled in parallel in a first heat-shrinkable film in a portion thereof corresponding to an upper end and a lower end of the adjacent cylindrical articles in a portion thereof corresponding to a boundary between the adjacent cylindrical articles.

The unit package may also be the one fabricated by wrapping a plurality of cylindrical articles assembled in a first heat-shrinkable film in a portion thereof corresponding to an upper end and a lower end of the adjacent cylindrical articles in a portion thereof corresponding to a boundary between the adjacent cylindrical articles, and is curved in such a manner as to be curved in a portion thereof corresponding to a boundary between the adjacent cylindrical articles located adjacent to the boundary.

In this case, it is effective that the package includes an adhesive layer at least on inner surface of the film on a periphery... is preferable that the slit is formed in the film on each side of the package, and is dimensioned within a

prescribed range determined so that each individual cylindrical article does not fall out of the package even when the package is dropped.

Further, it is effective that the package is provided with a perforation that connects the slit formed on one side of the package to the slit formed on the other side of the package.

Also, the slit may be formed in the film on one side of the package, and a perforation connecting both ends of the slit is formed in the film on the other side of the package.

It is also effective to use a film in the form of a sheet as... ..wrap the articles together, and further position the welded portion on one side of the package. As the film, a film in the form of a tube may be used.

This unit package can be fabricated according to the methods described in the above Embodiments 1 and 2.

Each of Figs. 30 and 31 shows a schematic perspective view of a composite package containing a plurality of unit packages. As shown in Fig. 30, two unit packages 61 assembled in parallel are wrapped in a second heat-shrinkable film 64, and the film is heat-shrunk to wrap the packages. For the sake of clarity, the first heat-shrinkable film forming each unit package 61 is omitted in Fig. 30.

Fig. 31 shows a schematic perspective view of the composite package in accordance with the present invention. The composite package 65 shown in Fig. 31 has one pore 66 in an end portion of the boundary between the two unit packages 61.

With the provision of this pore 66, the composite package 65 offers the following effect. That is, when the composite package 65 is lightly bent, for example, at the boundary between the unit packages, as shown in Fig. 32, the second heat-shrinkable film 64 begins to tear out starting at the pore 66. Then, the composite package 65 can be easily opened to remove each unit package 61.

Fig. 32 is a schematic perspective view showing how the composite package 65 in accordance with the present invention is opened. When the composite package 65 is bent at the boundary between the unit packages 61, as shown in Fig. 32, the second heat-shrinkable film begins to tear out starting at the pore 66.

In the composite package 65 shown in Fig. 31, the pore 66 is provided only on one side of the composite package. As shown in Fig. 32, the pore 66 should be provided only on the side that protrudes when the composite package 65 is bent, but it may be provided on the opposite side.

Further, in the composite package 65 shown in Fig. 31, the pore is provided only in one end portion (upper end portion) of the boundary between the two unit packages 61. However, to achieve easier opening, the pore may also be provided in the lower... ..the exterior surface of the second heat-shrinkable film on the side of the composite package 65 opposite to the side on which the pore is provided. This configuration has the effect of facilitating the opening of the composite package 65, because when the package is bent or twisted, the label 67 functions as a cutting tape.

In the present invention, the number of cylindrical batteries contained in each unit package and the number of unit packages contained in the composite package are not specifically limited, and can be changed as desired according to the dimensions and... ..the effect of the invention.

Fig. 34 is a schematic perspective view of another composite package in accordance with the present invention, which contains three unit packages 61. Two pores 66 are provided in each of the upper and lower end portions of the boundary between adjacent unit packages 61.

Fig. 35 is a schematic perspective view for explaining how the composite package shown in Fig. 34 is opened. When two of the pores 66 are provided in portions of the boundary 68 as shown in Fig. 34, opening of the composite package is facilitated because, when the composite package 65 is bent at the boundary 68 as shown in Fig. 35, the second heat... ..but from the standpoint of maintaining secure fixation and retention of the plurality of unit

packages, it is preferable to form the pore as pinhole circular in shape. By at least... ..heat-shrinkable film that corresponds to an end portion of the boundary between the unit packages, will be described.

The designated position varies depending on such factors as the shape, dimensions, quantity and the like of the unit packages contained in the composite package of the invention and the shape, dimensions, quantity and the like of the battery contained in each unit package. Therefore, by considering the above factors, any person skilled in the art is able to... ..scope that does not impair the effect of the invention that the plurality of unit packages are stably fixed and retained.

Further, to obtain the composite package of the present invention, performance requirements of the first and second heat-shrinkable films must... ..First, since the second heat-shrinkable film is shrunk by heating after fabricating the unit packages with the first heat-shrinkable film, it would be undesirable if the first heat-shrinkable... ..the second heat-shrinkable film.

Further, since the total weight of the plurality of unit packages is considerably large, the load applied to the second heat-shrinkable film is larger than... ..does not impair the effect of the invention or the inherent effect of the composite package for batteries.

For example, a polyethylene terephthalate (PET) film (melting point: about 250(degree)C... ..by way of example, but it is not limited thereto.

Example 3

First, a unit package of the structure shown in Fig. 29 was fabricated by arranging four AA size alkaline... ..the welded portion was positioned only at the bottom side of the batteries.

Next, a package of the structure shown in Fig. 34 was fabricated by arranging three unit packages in parallel, wrapping them together in a three-layer heat-shrinkable film consisting of polypropylene... ..at break: about 130%), and heat-shrinking the film to fix and retain the unit packages. The film ends were thermally welded so that the welded portion was positioned at three locations, namely, the bottom side of the unit packages and along the left and right sides of the left-hand side and right-hand side unit packages, respectively (the so-called pillow package).

Then, four pores were formed in each of the two boundary portions between the respective unit packages by sticking a 0.97-mm diameter needle at positions about 6 mm from the upper and lower edges of the batteries, to complete the fabrication of the composite package in accordance with the present invention.

When the thus fabricated composite package of the invention was bent as shown in Fig. 35 according to the package opening method previously described with reference to Fig. 32, the second heat-shrinkable film began to tear out at the pores, and the package was able to be opened easily.

Industrial Applicability

According to the cylindrical article package fabrication method of the present invention, a package for cylindrical articles such as batteries can be fabricated by easily forming perforations in suitable positions on the package without scratching or nicking the cylindrical articles.

The invention also provides a package for ...remaining cylindrical articles can be ensured.

Furthermore, in accordance with the present invention, a composite package can be provided that allows each unit package to be removed by easily tearing out the outer film while reliably and stably retaining the fixed and retained state of each unit package.

Although the present invention has been described in terms of the presently preferred embodiments, it...

Claims: ...A1

1. A package for cylindrical articles, fabricated by wrapping a plurality of cylindrical articles assembled in parallel in... ..least either one of an upper end face and a lower end face of the package corresponding to an upper end and a lower end of said cylindrical articles in a... ..corresponding to a boundary between said adjacent cylindrical articles.
2. A method of fabricating a package for cylindrical articles, said package being fabricated by wrapping a plurality of cylindrical articles assembled in parallel in a heat... ..film located at an upper end face and/or a lower end face of said package corresponding to an upper end and/or a lower end of said cylindrical articles, and... ..face at a boundary between said adjacent cylindrical articles.
3. The method of fabricating a package for cylindrical articles in accordance with claim 2, further comprising a step (b) of forming a perforation in said heat-shrinkable film located on a side of said package, in which said cylindrical articles are assembled in parallel, along said boundary between said adjacent cylindrical articles.
4. The method of fabricating a package for cylindrical articles in accordance with claim 2, further comprising a step (c) of forming... ..shrinkable film in outermost portions of said upper end and said lower end of said package along said boundary between said adjacent cylindrical articles.
5. The method of fabricating a package for cylindrical articles in accordance with claim 3, wherein said slit forming step (a) is performed after performing said perforation forming step (b).
6. The method of fabricating a package for cylindrical articles in accordance with claim 4, wherein said step (b) and said step (c) are performed simultaneously.
7. A package for cylindrical articles, fabricated by wrapping a plurality of cylindrical articles assembled in parallel in... ..and retain said articles,

wherein said film has a slit on a side of said package along a boundary between said adjacent articles, and said film around said slit is curved... ..to outer circumferential surfaces of said cylindrical articles located adjacent to said boundary.

8. The package for cylindrical articles in accordance with claim 7, wherein said package includes an adhesive layer formed at least on inner surface of said film on a periphery of said slit.
9. The package for cylindrical articles in accordance with claim 7, wherein said adhesive layer is made of a heat sensitive adhesive agent.
10. The package for cylindrical articles in accordance with claim 7, wherein said slit is formed in said film on each side of said package.
11. The package for cylindrical articles in accordance with claim 7, wherein said slit is dimensioned within a prescribed range determined so that each individual cylindrical article does not fall out of said package even when said package is dropped.
12. The package for cylindrical articles in accordance with claim 7, wherein said package includes a perforation that connects a slit formed on one side of said package to a slit formed on the other side of said package.
13. The package for cylindrical articles in accordance with claim 7, wherein said slit is formed in said film on one side of said package, and a perforation connecting both ends of said slit is formed in said film on the other side of said package.
14. The package for cylindrical articles in accordance with claim 7, wherein said film is in the form... ..wrap said articles together, and said welded portion is positioned on one side of said package.

15. The package for cylindrical articles in accordance with claim 7, wherein said film is in the form of a tube.
16. A method of fabricating a package for cylindrical articles, said package being fabricated by wrapping a plurality of cylindrical articles assembled in parallel in a heat... ..and retain said articles, wherein said film has a slit on a side of said package along a boundary between said adjacent articles, and said film around said slit is curved... ..conform to the outer circumferential surfaces of said adjacent cylindrical articles.
17. A composite battery package in which a plurality of unit packages, each fixing and retaining a plurality of cylindrical batteries assembled in parallel in a first...in a portion thereof corresponding to an end portion of a boundary between said unit packages.
18. The composite battery package in accordance with claim 17, wherein said pore is provided at each end portion of said boundary on each side of said unit package.
19. The composite battery package in accordance with claim 17, wherein said first heat-shrinkable film has a higher melting...

9/K/7 (Item 7 from file: 348)
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Inventor:

- ...JP)
 ; ;
- TAKAHASHI, Shoji Citizen Watch Co., Ltd...
 ; ;

Country	Number	Kind	Date
Type	Pub. Date	Kind	Text
...Date of request for examination... ..Date of drawing up and dispatch of supplementary:search report	19		
Available Text	Language	Update	Word Count
Total Word Count (Document A)			
Total Word Count (Document B)			
Total Word Count (All Documents)			

Specification: ...The rotor 21 has a ring magnet 22 on its upper surface, to which the hub of the magnetic recording disk 18 in the cartridge 17 is magnetically attracted when the... ..may be based on a sequential-feed system (chain lines in FIG. 5 represent a carrier for sequential feed) in which a rolled sheet of SUS is rewound as it is... ..mounting hole 24 is roughly punched.

A member represented by chain lines c is a carrier of the stamped sheet 23.

(Second Process) FIG. 6

The recesses 9 and 11 are...recess 9 between them, with respect to the insert die 58, is repeated about three times. In consequence, the ring-shaped rising wall 53 can be formed steadily on the peripheral...

Claims: ...to claim 1, which further comprises forming a plurality of coil relief slots for the location of stator coils in the bottom of said formed recess, said slots being arranged radially... ...according to claim 1, wherein a second recess with a circular cross section for the location of a rotating shaft portion of a recording/reproducing head element is formed in said... ...according to claim 14, wherein a second recess with a circular cross section for the location of a rotating shaft portion of a recording/reproducing head element is formed in said...

9/K/8 (Item 8 from file: 348)

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Inventor:

• Kawano, Takanobu,c/o Nippon Soken, Inc...

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<u>Country</u>	<u>Number</u>	<u>Kind</u>	<u>Date</u>	
Type		Pub. Date	Kind	Text
...Date of request for examination... ...Date of dispatch of the first examination report		19		
Available Text		Language	Update	Word Count
Total Word Count (Document A)				
Total Word Count (Document B)				
Total Word Count (All Documents)				

Specification: ...the rubber with the fiber bag. After setting the bag 36 into a high pressure container 37, high pressure gaseous nitrogen or the like is supplied through an inlet 37a of the container.

The high pressure gas enters not only the outside of the bag 36 but also... ...and left delivery pipes 40 and 41 is made of a pipe-shaped pressure storing container having a large cross section, and has three injectors 4 for injecting fuel into cylinders...for the high frequency, that is a frequency of a harmonics having two or several times bigger than that of the discharge pulsation of the fuel pump 2.

In light of...and 86 have the phase difference of one half of the wavelength by defining the locations of a pair of cylinders 81 and 82 in the cylinder block 77, that is... ...placed on the cylinder block 77 around the drive shaft 79 such that the angular locations of the cylinders are $n(\theta)/2$, wherein (θ) represents an angle between the protrusions... ...the cylinders of the fuel pump may be three or greater. In short, the angular locations of a plurality of cylinders are defined to deviate the phase such that the pressure... ...another cam having any shape such as a polygonal cam. In that case, the angular locations of the cylinders are defined $n(\theta)/2$ as described above based on the relationship between the angular locations of the cam protrusions if the cylinders are a pair of cylinders.

For example, a... ...to 1, and the plungers 83 and 84" (that is, cylinders, too) are provided at locations deviated 90 degrees ($1 \times 180(\text{degree}) / 2 = 90(\text{degree})$) each other.

In the embodiments of the... ..a whole, and the discharge pulsations are canceled each other by defining the relative angular locations of the plural cylinders.

Instead, it is possible to place a plurality of cylinders parallel... ..In this case a plurality of cylinders are located, similarly to the above star-shaped locations, such that they have certain relationships regarding the angular locations with respect to the drive shaft.

Although the present invention has been described in connection...

Specification: ...the rubber with the fiber bag. After setting the bag 36 into a high pressure container 37, high pressure gaseous nitrogen or the like is supplied through an inlet 37a of the container.

The high pressure gas enters not only the outside of the bag 36 but also... ..and left delivery pipes 40 and 41 is made of a pipe-shaped pressure storing container having a large cross section, and has three injectors 4 for injecting fuel into cylinders...for the high frequency, that is a frequency of a harmonics having two or several times bigger than that of the discharge pulsation of the fuel pump 2.

In light of...and 86 have the phase difference of one half of the wavelength by defining the locations of a pair of cylinders 81 and 82 in the cylinder block 77, that is... ..placed on the cylinder block 77 around the drive shaft 79 such that the angular locations of the cylinders are $n\theta/2$, wherein θ represents an angle between the protrusions, and... ..the cylinders of the fuel pump may be three or greater. In short, the angular locations of a plurality of cylinders are defined to deviate the phase such that the pressure... ..another cam having any shape such as a polygonal cam. In that case, the angular locations of the cylinders are defined $n\theta/2$ as described above based on the relationship between the angular locations of the cam protrusions if the cylinders are a pair of cylinders.

For example, a... ..to 1, and the plungers 83 and 84" (that is, cylinders, too) are provided at locations deviated 90 degrees ($1 \times 180(\text{deg}) / 2 = 90(\text{deg})$) each other.

In the example/embodiments of... ..a whole, and the discharge pulsations are canceled each other by defining the relative angular locations of the plural cylinders.

Instead, it is possible to place a plurality of cylinders parallel... ..In this case a plurality of cylinders are located, similarly to the above star-shaped locations, such that they have certain relationships regarding the angular locations with respect to the drive shaft.

A damping chamber (11, 22) is formed in a...

9/K/9 (Item 9 from file: 348)

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Inventor:

- ...JP)
;;
- Takahashi, Shigeru...
;;

Country	Number	Kind	Date
Type	Pub. Date	Kind	Text
...Date of withdrawal of application... ...Date of request for examination	19		
Available Text	Language	Update	Word Count
Total Word Count (Document A)			
Total Word Count (Document B)			
Total Word Count (All Documents)			

Specification: ...Arabidopsis is thought to be inhibited by the expression of this gene. Although the approximate location of this gene on the chromosome is reported (Yang et al. (1995), Dev. Biol., vol...a protein of (5) or (6).

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 shows the location of the DNA clones of the chromosome region containing Arabidopsis "MPC1" gene and the markers...appropriate adjuvant by intraperitoneal or subcutaneous injection. Additional immunization is then performed 2 to 10 times every one to four week, preferably every one or two week. After the fourth week...fruits will increase their productivity or change the flowering time, which enables the production and shipment of fruits out of season. In addition, inhibiting flowering of wood will not only enhance... ...the wild type.

The strains of heterozygotes were backcrossed onto wild type strain Landsberg two times and the next generation obtained was mated with wild type strain Columbia. A DNA was...the gene fragment, nucleotide sequence encoding amino acids are divided by three introns and their locations are the same as that of Arabidopsis "MPC1" gene.

The fragment amplified for rice by...

9/K/10 (Item 10 from file: 348)

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Inventor:

- ...JP)
;;
- Takahashi, Satoru...
;;

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...Date of request for examination	19		
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Total Word Count (All Documents)			

Specification: ...region 103.

Figure 9 illustrates the distributions of dopant concentrations and the distribution of a carrier concentration in the depth direction, which are both measured along the line X-X' in... ..type buried region 102 from the surface of the substrate and the control over the carrier concentration in the region between the p-type buried region 102 and the surface of...dependent on the conditions under which the thermal oxide film 105 is formed. Accordingly, the carrier concentration in that surface region of the extended drain region 103 is affected by a... ..during the process step of forming the thermal oxide film 105. More specifically, the surface carrier concentration in the extended drain region 103 is very sensitive to, or greatly variable with... ..the thermal oxide film 105. Accordingly, it is extremely difficult to precisely control the surface carrier concentration of the extended drain region 103 during the thermal oxidation process step.

As shown...type heavily doped region 1 provides a current path with a low resistance.

The exemplary locations of the n-type heavily doped region 1 shown in Figures 5B and 5C can...a photolithography technique. This thick resist film 16a has an opening defining the shape and location of the buried region to be formed. Then, boron ions are implanted through this opening...

9/K/11 (Item 11 from file: 348)
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Inventor:

- ...JP)
 ;;
- Takahashi, Seiji...
 ;;

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Type	Pub. Date		Kind	Text
...Date of request for examination... ...Date of dispatch of the first examination report	19			
Available Text	Language		Update	Word Count
Total Word Count (Document A)				
Total Word Count (Document B)				
Total Word Count (All Documents)				

Specification: ...energy, there may result an error in the detection if the detection is repeated plural times after said energy application. For this reason, the temperature detection is preferably conducted during the... ..recording is executed from a data position which can be arbitrarily instructed according to the location of the abnormality in the recording. This embodiment is particularly suitable, among various recording apparatus... ..in the main assembly, or to a cartridge type recording head having an integral ink container.

The provisions of the recovery means and/or the auxiliary means for the preliminary operation...

Specification: ...energy, there may result an error in the detection if the detection is repeated plural times after said energy application. For this reason, the temperature detection is preferably conducted during the...recording is executed from a data position which can be arbitrarily instructed according to the location of the abnormality in the recording. This embodiment is particularly suitable, among various recording apparatus... ..in the main assembly, or to a cartridge type recording head having an integral ink container.

The provisions of the recovery means and/or the auxiliary means for the preliminary operation...

9/K/12 (Item 12 from file: 348)

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Inventor:

- ...JP)
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- Takahashi, Satomi, Canon Kabushiki Kaisha...
;;

<u>Country</u>	<u>Number</u>	<u>Kind</u>	<u>Date</u>
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Abstract ...equal to or smaller than a predetermined count, the names of the senders, the reception dates, and the subjects of the mail messages are displayed. When the number of mail messages...

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Specification: ...the list, not only are file names displayed, but also the sizes and the creation dates of the files. To print a file, a printer on a network is designated for... ..the transmission process, information stored in a transmission source apparatus is transmitted to a transmission destination apparatus. Therefore, when a user of a specific apparatus desires to transmit information available at... ..source apparatus to the user's apparatus, which then transmits the received information to the destination apparatus. For printing, a printing instruction, accompanied with print data, is issued by an apparatus...process instruction in accordance with the search condition that is designated by the search condition destination means.

According to again one more aspect of the present invention, an information processing method... ..process instruction in accordance with the search condition that is designated at the search condition destination step.

According to again one further aspect of the present ...process instruction in accordance with the search condition that is designated at the search condition destination step.

Embodiments of the present invention will now be described with reference to the accompanying...to be processed (Object), Object Count (the number of copies of the object), To (process destination), From (process source), By (process method), and all other process associated information.

The types of... ..Receive, Convert, Notify, and Operate.

As the Object, there are Action and Object. To (process destination) and From (process source) include the Sender or the Receiver, as a Person, and a...device does not support a requested notification method, the notification can be transmitted to the destination device via an intermediate device.

At step S2101 the name and the address of a... ..obtained. At step S2102 a check is performed to determine whether the device is a destination device for receiving the notification, or an intermediate device for relaying the notification to another device.

If the device is the final destination, at step S2103 a temporary file is created, and at step S2104 the notification message...selected as an action, a print time can be set as the item. A specific date (absolute date) can be set for the print time, or a relative time that must elapse following... ..2 weeks later", are prepared and listed as choices in a menu. When an absolute date is employed, the current date is regarded as a default value. To select and input another date, a pertinent date displayed on a calendar is touched. To select another time, the current time is changed... ..set. In this case, as well as in the print data later case, the absolute date is designated for the holding limit, or a holding period, such as one hour (For 1 Hour), can be selected and set in the menu. To designate an absolute date or a relative date, a touch keyboard may be displayed with which numerals can be directly entered, or a displayed numeral may be incremented or decremented the number of times a specific button is selected.

The action is set and is performed in accordance with the action-associated item and the date item that are thus selected or established. First, when "Print later" is selected, at step... ..the name are given of a device that is designated to serve as an added destination. Also designated is the period of time for the publication of the information. For this, as in the previous Printing/Holding case, an absolute date may be set to constitute the publication period, or instead, a time period may be... ..from the current time. If immediate publication of the information is not desired, a beginning date for the publication process may be set. In this case, a relative period, such as...list.

The pending jobs are a job that is to be printed on a specific date, a job that is to be transmitted on a specific date, and a job that is simply to be held until a specific date has been reached (and which will be deleted if it is not processed before the specified date). Job names, the senders or the recipients, the action types (Print, Send and Hold), and scheduled action dates are entered in the list. A variety of colors or identifying marks that correspond to...a popup window, e-mail, a telephone, a facsimile machine, or a pager), a notification destination (an address, a telephone number, etc)., a notification trigger (at the time of a success... ..Fig. 70 is a diagram showing an example transmission setup menu.

At step S6203 a destination and a transmission time are set and a process is selected. These setups are performed At this time, the list of transmission destinations is displayed. At step S6310 a new transmission destination is added/designated, a transmission destination selected from the list is corrected (deleted or changed), a process to be performed by the transmission destination is changed, a password is changed, and a transmission time is changed. For the setup... ..At step S6602 a public information addition menu (Fig. 111) is displayed, and an added destination and a publication period are designated. The details are the same as was explained for...printing, a user accesses his or her desktop and obtains and prints mail. The printing destination can be designated as in the previous job printing. For the printing of all the...in this embodiment, but this setup can be changed), the names of senders, the reception dates and the subjects of the messages are displayed, as is shown in Fig. 138 (step... ..Device (the name of an operation source device), To Device (the name of an operation destination device), To Person (the name of an operation destination user), After Time/Before Time (operation time zone), Action Type (the type of action), and... ..Device (the name of an operation source device), To Device (the name of an operation destination device), To

Person (the name of an operation destination user), After Time/Before Time (operation time zone) and Action Type (the type of action... Year is set to a designated year (step S15006 to S15008). When the type of date designated is a complete date, Value is set to the designated date. When the type of date designated is the name of a month, Value is set to the designated month (step...are set (steps S15404 to S15406). Further, a command button is set, a display start date is obtained and displayed at the top of the header, and data are obtained and...

Claims: ...process instruction in accordance with said search condition that is designated by said search condition destination means.

100. An information processing apparatus according to claim 99, wherein said process instruction storage...process instruction in accordance with said search condition that is designated at said search condition destination step.

119. An information processing method according to claim 118, wherein said process instruction storage... ...process instruction in accordance with said search condition that is designated at said search condition destination step.

125. A client for use in the method of any one of claims 12... ...35 to 45, 55 to 62, 73 to 81 or 102 to 120.

127. A carrier medium carrying processor implementable instructions for controlling a processor to carry out the method of...

9/K/13 (Item 13 from file: 348)

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Total Word Count (Document A)					
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Total Word Count (All Documents)					

Specification: ...a popup window, e-mail, a telephone, a facsimile machine, or a pager), a notification destination (an address, a telephone number, etc.), a notification trigger (at the time of a success... ...Fig. 70 is a diagram showing an example transmission setup menu.

At step S6203 a destination and a transmission time are set and a process is selected. These setups are performed... ...is a diagram showing an example correction menu. At this time, the list of transmission destinations is displayed. At step S6310 a new transmission destination is added/designated, a transmission destination selected from the list is corrected (deleted or changed), a process to be performed by the transmission destination is changed, a password is changed, and a transmission time is changed. For the setup...At step S6602 a public information addition menu (Fig. 111) is displayed, and an added destination and a publication period are designated. The details are the same as was explained for...printing, a user accesses his or her desktop and obtains and prints mail. The printing destination can be designated as in the previous job printing. For the printing of all the...a printer) can be designated as conditions. On the screen in Fig. 141, a start date and an end date (Valid from, to) for validating a set command can be designated, and a period (Valid...such as using another printer to print the job, can be set.

Similarly, a notification destination and the contents of the notification are set when Notify is selected.

Figs. 144A and...

9/K/14 (Item 14 from file: 348)

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Inventor:

- ...JP)
;;
- Takahashi, Satomi...
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Type	Pub. Date	Kind	Text
...Date of request for examination... ...Date of dispatch of the first examination report	19		

Available Text	Language	Update	Word Count
Total Word Count (Document A)			
Total Word Count (Document B)			
Total Word Count (All Documents)			

Specification: ...to be processed (Object), Object Count (the number of copies of the object), To (process destination), From (process source), By (process method), and all other process associated information.

The types of... ...Receive, Convert, Notify, and Operate.

As the Object, there are Action and Object. To (process destination) and From (process source) include the Sender or the Receiver, as a Person, and a...device does not support a requested notification method, the notification can be transmitted to the destination device via an intermediate device.

At step S2101 the name and the address of a... ...obtained. At step S2102 a check is performed to determine whether the device is a destination device for receiving the notification, or an intermediate device for relaying the notification to another device.

If the device is the final destination, at step S2103 a temporary file is created, and at step S2104 the notification message...selected as an action, a print time can be set as the item. A specific date (absolute date) can be set for the print time, or a relative time that must elapse following... ...2 weeks later", are prepared and listed as choices in a menu. When an absolute date is employed, the current date is regarded as a default value. To select and input another date, a pertinent date displayed on a calendar is touched. To select another time, the current time is changed... ...set. In this case, as well as in the print data later case, the absolute date is designated for the holding limit, or a holding period, such as one hour (For 1 Hour), can be selected and set in the menu. To designate an

absolute date or a relative date, a touch keyboard may be displayed with which numerals can be directly entered, or a displayed numeral may be incremented or decremented the number of times a specific button is selected.

The action is set and is performed in accordance with the action-associated item and the date item that are thus selected or established. First, when "Print later" is selected, at step...the name are given of a device that is designated to serve as an added destination. Also designated is the period of time for the publication of the information. For this, as in the previous Printing/Holding case, an absolute date may be set to constitute the publication period, or instead, a time period may be... ..from the current time. If immediate publication of the information is not desired, a beginning date for the publication process may be set. In this case, a relative period, such as... ..list.

The pending jobs are a job that is to be printed on a specific date, a job that is to be transmitted on a specific date, and a job that is simply to be held until a specific date has been reached (and which will be deleted if it is not processed before the specified date). Job names, the senders or the recipients, the action types (Print, Send and Hold), and scheduled action dates are entered in the list. A variety of colors or identifying marks that correspond to... ..a popup window, e-mail, a telephone, a facsimile machine, or a pager), a notification destination (an address, a telephone number, etc.), a notification trigger (at the time of a success... ..Fig. 70 is a diagram showing an example transmission setup menu.

At step S6203 a destination and a transmission time are set and a process is selected. These setups are performed... ..is a diagram showing an example correction menu. At this time, the list of transmission destinations is displayed. At step S6310 a new transmission destination is added/designated, a transmission destination selected from the list is corrected (deleted or changed), a process to be performed by the transmission destination is changed, a password is changed, and a transmission time is changed. For the setup... ..At step S6602 a public information addition menu (Fig. 111) is displayed, and an added destination and a publication period are designated. The details are the same as was explained for...printing, a user accesses his or her desktop and obtains and prints mail. The printing destination can be designated as in the previous job printing. For the printing of all the...

Specification: ...of transmission of the jobs to the printer and generates a display signal indicating the times at which the respective jobs will be printed.

WO 97/32274 discloses a method of...to be processed (Object), Object Count (the number of copies of the object), To (process destination), From (process source), By (process method), and all other process associated information.

The types of... ..Receive, Convert, Notify, and Operate.

As the Object, there are Action and Object. To (process destination) and From (process source) include the Sender or the Receiver, as a Person, and a...device does not support a requested notification method, the notification can be transmitted to the destination device via an intermediate device.

At step S2101 the name and the address of a... ..obtained. At step S2102 a check is performed to determine whether the device is a destination device for receiving the notification, or an intermediate device for relaying the notification to another device.

If the device is the final destination, at step S2103 a temporary file is created, and at step S2104 the notification message...selected as an action, a print time can be set as the item. A specific date (absolute date) can be set for the print time, or a relative time that must elapse following... ..2 weeks later", are prepared and listed as choices in a menu. When an absolute date is employed, the current date is regarded as a default value. To select and input another date, a pertinent date displayed on a calendar is touched. To select another time, the current time is changed... ..set. In this case, as well as in the print data later case, the absolute date is designated for the holding limit, or a holding period, such as one hour (For 1 Hour), can be selected and set in the menu. To designate an absolute date or a relative date, a touch keyboard may be displayed with which numerals can be directly entered, or a displayed numeral may be incremented or decremented the number of times a specific button is selected.

The action is set and is performed in accordance with the action-associated item and the date item that are thus selected or established. First, when "Print later" is selected, at step... ..the name are given of a device that is designated to serve as an added destination. Also designated is the period of time for the publication of the information. For this, as in the previous Printing/Holding case, an absolute date may be set to constitute the publication period, or instead, a time period may be... ..from the current time. If immediate publication of the information is not desired, a beginning date for the publication process may be set. In this case, a relative period, such as... ..list.

The pending jobs are a job that is to be printed on a specific date, a job that is to be transmitted on a specific date, and a job that is simply to be held until a specific date has been reached (and which will be deleted if it is not processed before the specified date). Job names, the senders or the recipients, the action types (Print, Send and Hold), and scheduled action dates are entered in the list. A variety of colors or identifying marks that correspond to... ..a popup window, e-mail, a telephone, a facsimile machine, or a pager), a notification destination (an address, a telephone number, etc.), a notification trigger (at the time of a success... ..Fig. 70 is a diagram showing an example transmission setup menu.

At step S6203 a destination and a transmission time are set and a process is selected. These setups are performed... ..is a diagram showing an example correction menu. At this time, the list of transmission destinations is displayed. At step S6310 a new transmission destination is added/designated, a transmission destination selected from the list is corrected (deleted or changed), a process to be performed by the transmission destination is changed, a password is changed, and a transmission time is changed. For the setup... ..At step S6602 a public information addition menu (Fig. 111) is displayed, and an added destination and a publication period are designated. The details are the same as was explained for...printing, a user accesses his or her desktop and obtains and prints mail. The printing destination can be designated as in the previous job printing. For the printing of all the...

Claims: ...claim 60, wherein said execution time designation means designates the time by using an absolute date.

64. An information processing apparatus according to claim 63, wherein said execution time designation means includes:

calendar display means for displaying a calendar; and

date selection means for selecting a date in said calendar displayed by said calendar display means, and wherein said execution time designation means designates, as a time period, said date selected by said date selection means.

65. An information processing apparatus according to claim 64, wherein said execution time designation means employs a current date as an initial setup value for a date for printing, and wherein said calendar display means displays said calendar to designate a date other than said current date.

66. An information processing apparatus according to claim 60, wherein said execution time designation means designates a time period using a relative date.

67. An information processing apparatus according to claim 66, wherein said execution time designation means includes:

menu display means for displaying a menu employing a relative date as an item; and

item selection means for selecting an item in said menu displayed... ..display means, and wherein said execution time designation means designates, as a print time, a

date that corresponds to said item selected by said item selection means.

68. An information processing... ..wherein at said execution time designation step the time is designated by using an absolute date.

72. An information processing method according to claim 71, wherein said execution time designation step includes: a calendar display step of displaying a calendar; and

a date selection step of selecting a date in said calendar displayed at said calendar display step, and wherein at said execution time designation step said date selected at said date selection step is designated as a time period.

73. An information processing method according to claim 72, wherein at said execution time designation step a current date is employed as an initial setup value for a date for printing, and wherein at said calendar display step said calendar is displayed to designate a date other than said current date.

74. An information processing method according to claim 68, wherein at said execution time designation step a time period is designated by using a relative date.

75. An information processing method according to claim 74, wherein said execution time designation step includes: a menu display step of displaying a menu employing a relative date as an item; and

an item selection step of selecting an item in said menu displayed at said menu display step, and wherein at said execution time designation step, a date that corresponds to said item selected at said item selection step is designated as a... ..39 to 47, 54 to 58, 68 to 75 or 85 to 92.

96. A carrier medium carrying processor implementable instructions for controlling a processor to carry out the method of...

9/K/15 (Item 15 from file: 348)

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Inventor:

• Takahashi, Sadao...

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Specification: ...electrophotographic type image forming apparatus in which an electric charge is supplied to an image carrier, such as a photosensitive member, by bringing a charger means, such as a charging roller, into contact with the image carrier. This kind of charger means is called in the following "contact-to-charge" means or... ...a charger-device for supplying an electric charge to a photosensitive body as an image carrier. A corona type discharge device is widely used as the charger-device. In this corona... ...roller is employed as a contact-to-charge means for contacting and charging an image carrier. This contact-to-charge type image forming apparatus offers a lot of advantages. For example... ...quantity of ozone produced during the course of applying an electric charge to the image carrier can be minimized; the provision of the ozone filter and the air-stream generating fan shifted with a gentle level, and therefore the number of times required for the correction can be rather small, for example, once at the time of... ...comprises a charging roller for charging the surface of a photoconductive element or an image carrier during a image forming process. Further a charging device with a charging roller is provided... ...provide an image forming apparatus capable of minimizing, as much as possible, the number of times for interrupting an image forming procedure while avoiding deterioration of the image quality even in... ...of the present invention comprises contact-to-charge means for contacting and charging an image carrier; voltage applying means for applying a reference voltage to the contact-to-charge means; potential detection means for detecting charged voltage of the image carrier; environmental condition detection means for detecting environmental conditions which have an effect on the charge... ...voltage of the reference voltage applying means so that the charge potential of the image carrier is brought to a target potential level, and timing setting means for setting an execution... ...value based on the temperature detected by the temperature sensor, so that the number of times of execution of the reference voltage correction means is reduced as the temperature of the... ...the temperature of the contact-to-charge means so that the charge potential of the carrier may come closer to the target potential level. BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1... ...present invention. In Fig. 3, reference numeral 1 denotes a photosensitive drum, as an image carrier, having photoconductive properties, and reference numeral 2 denotes a charging roller as a contact-to...the charging roller 2 are continuously executed. The potential sensor 10 is installed at a location away from the surface of the photosensitive drum 1 with the space of 2 mm...reason is as follows.

When the procedures for forming an image are repeated dozens of times (more than several tens of times), the temperature of the charging roller 2 is raised by some causes, such as contact... ...the correction of this reference potential. From a view point of reducing the number of times for interrupting the image forming procedure, the frequency of this correction is preferably as smaller... ...from a view point of the life of the photosensitive drum 1, the number of times of this correction is preferably as smaller as possible.

When the temperature of the charging... ...interval for executing the correction is increased as the temperature is raised, the number of times for interrupting the image forming procedure can be reduced.

To be more specific, for example... ...of the photosensitive drum 1 at the target potential level V_0 . Thus, the number of times for interrupting the image forming procedure can be reduced and deterioration of the photosensitive drum... ...up a relation between the temperature and the number of copies. Accordingly, the number of times for executing the reference voltage correction means can be lessened almost without accompanying the deterioration...25 degrees centigrade.

According to the third embodiment of the present invention, the number of times for executing the reference voltage correction means can be reduced, when compared with the case invention is constructed in the manner as hereinbefore described, the number of times for interrupting the image forming procedure can be reduced as much as possible while avoiding...

Claims: ...forming apparatus of the electrophotographic type comprising:

contact charging means (2) for charging an image carrier (1) by coming in contact with said image carrier (1);

reference voltage applying means (21) for applying a reference voltage to said contact charging means;

potential detection means (10) for detecting a charge potential of said image carrier;

environmental condition detection means (11) for detecting environmental conditions which have an effect on a...
 ...voltage of said reference voltage applying means so that the charge potential of said image carrier is brought to a target potential level, and timing setting means for setting an execution... ...basis of the temperature detected by said temperature sensor (11) so that the number of times of execution of said reference voltage correction means is reduced as the temperature of said... ...temperature of said contact charging means (2) so that the charge potential of said image carrier may come closer to the target potential level.

9/K/16 (Item 16 from file: 348)
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Inventor:

- Takahashi, Shigeki...
- ;;

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9/K/17 (Item 17 from file: 348)
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Inventor:

- Takahashi, Shigeki...
- ;;

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Specification: ...and patterned by the publicly known photolithographic technique with the central part thereof open, the location of which being coincided with a location of cell formation. Then, boron ions (B^{sup +}) are implanted through the field oxide film...8, the interface interfacial sequence density of the interface of the channel 5 and the carrier mobility are as high as those of the conventional DMOS.

Now, as illustrated in FIG...

9/K/18 (Item 18 from file: 348)

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Inventor:

- ...JP)
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- Takahashi, Satoshi, c/o Konica Corporation...
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<u>Country</u>	<u>Number</u>	<u>Kind</u>	<u>Date</u>
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Abstract ...A2

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Specification: ...image forming apparatus.

Compared with 1-component-developer composed of magnetic toner without using magnetic carrier, 2-component-developer, in which toner and magnetic carrier are mixed, is advantageous in that: the toner can be easily subjected to triboelectric charging... ...Consequently, 2-component-developer is frequently used although the quantity of toner with respect to carrier must be controlled.

The 2-component-developer is applied to the following developing apparatus: a... ...maintained in a non-contact condition with respect to the image forming body. While magnetic carrier of the thin developer layer adheres onto the surface of the developing sleeve, toner particles are separated from the magnetic carrier by the action of an

oscillating electric field, and scattered in the gap so that... lowered at a position of the magnet to be used for development, so that much carrier is deposited onto the surface ...the following developing apparatus:

In the developing apparatus, 2-component developer containing toner and magnetic carrier is used; a developing sleeve is rotated being opposed to the surface of an image... occurrence of coagulation can be avoided, further the toner particles can be uniformly mixed with carrier particles, and the conveyance and charging properties are improved.

In general, dye and pigment are... amount of pigment is 3 to 15 weight parts with respect to resin.

The magnetic carrier is made in such a manner that spherical ferrite particles, the weighted average particle size... thickness of which is 0.5 (μ m). When the average particle size of magnetic carrier is large, the developer layer formed on the developing sleeve becomes rough. Therefore, even when... the condition of high toner concentration. In the case where the average particle size of carrier is too small, the carrier particles tend to adhere onto the photoreceptor surface, and further the carrier particles tend to scatter together with the toner particles. These phenomena relate to the intensity of the magnetic field activated to the carrier particles, and also relate to the intensity of magnetization of the carrier particles. The following magnetic carrier is preferably used: The weighted average particle size is 20 to 100 (μ m), and... field of 500 oersted.

The developer is made in the following manner:

The above magnetic carrier is mixed with toner so that the toner ratio can be 5 wt%. Further, hydrophobic... charged. Due to the foregoing, toner particles electrostatically adhere onto the spherical surfaces of magnetic carrier particles. The above developer particles are moved by the supply roller, and adhere onto the.....and when the developer layer thickness $H(\text{sub}(D))$ is changed, an amount of deposited carrier is increased, which was confirmed by an experiment. In the magnetic pole portion, the thickness... condition of $V(\text{sub}(p-p))/D(\text{sub}(SD)) \leq 2000$, toner particles adhering to the carrier particles on the developing sleeve 11 can not be released from the carrier particles, which causes defective development. Under the condition of $V(\text{sub}(p-p))/D(\text{sub}... \text{drum } 100$, there are provided developing units 2, each developing unit containing developer composed of carrier and toner of yellow (Y), magenta (M), cyan (C) or black (K). First, the development... sleeve 21 is rotated while developer is deposited on its circumferential surface. The developer includes: carrier particles, the cores of which are made of ferrite, and the cores are coated with... H) and toner charging are the same. Therefore, toner particles which have been released from carrier particles are not deposited on the portion of $V(\text{sub}(H))$, the electric potential of... so that the latent image is made to be visual, that is, reversal development is carrier out.

After the first color image has been made visual, the image formation process of... because color toner particles were not scattered on the image forming body.

(3) Deposition of carrier particles was remarkably reduced, and practical problems were not caused.

(4) Characters were reproduced in... because color toner particles were not scattered on the image forming body.

(3) Deposition of carrier particles was remarkably reduced, and practical problems were not caused.

(4) Characters were reproduced in... is possible to set higher the magnetic flux density of both poles. As a result, carrier deposition on the image forming body can be reduced.

(4) Density of the developer layer...

Claims: ...surface thereof, for holding a toner image; two-component developer consisting of toner and magnetic carrier; a developing sleeve means, located in a vicinity of said image forming body means without... developer; a plurality of magnetic poles each of which is fixed at a respective predetermined location in said rotatable surface member; wherein said plurality of magnetic poles include a north pole... said developing sleeve means toward said surface of said image forming body means at a location where said rotatable surface member is closest to said

surface of said image forming body... ..surface of said image forming body means and said rotatable surface member, both at said location where said rotatable surface member is closest to said surface of said image forming body... ..said image forming body means between 5 and 40 mg/cm(sup 2) at said location, where said rotatable surface member is closest to said surface of said image forming body... ..and a center between said north pole and said south pole is substantially at said location where said rotatable surface member is closest to said surface of said image forming body...

9/K/19 (Item 19 from file: 348)
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Inventor:

- ...JP)
;;
- Takahashi, Seiji, c/o Canon Kabushiki Kaisha...
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Specification: ...energy, there may result an error in the detection if the detection is repeated plural times after said energy application. For this reason, the temperature detection is preferably conducted during the...recording is executed from a data position which can be arbitrarily instructed according to the location of the abnormality in the recording. This embodiment is particularly suitable, among various recording apparatus...in the main assembly, or to a cartridge type recording head having an integral ink container.

The provisions of the recovery means and/or the auxiliary means for the preliminary operation...

9/K/20 (Item 20 from file: 348)
EUROPEAN PATENTS

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Inventor:

- ...JP)
;;
- Takahashi, Shinya, c/o Intellectual Property Div...
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<u>Country</u>	<u>Number</u>	<u>Kind</u>	<u>Date</u>
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Abstract ...and a system identification number SID of a geographical area corresponding thereto are written before shipment. A predetermined operation disabling code is stored in the EEPROM (370), and the apparatus is...

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Available Text	Language	Update	Word Count
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Specification: ...a flow chart explaining a basic course of the product of the embodiment from the shipment to the start of use; and

Fig. 5 is a flow chart describing the operation...will now be explained.

First, a course of the present invention from the time of shipment to the start of actual use will be described with reference to Fig. 4. Unlike... ...the EEPROM 370 along with an operation disabling code in advance before the time of shipment by the manufacturer or the automobile telephone service company. More specifically, the identification numbers used... ...telephone are already written into the memory along with the operation disabling code before the shipment. If telephones having only the identification numbers written into the EEPROM are sold to users... ...inconvenience, the company writes a predetermined operation disabling code into the EEPROM 370 before the shipment so that the telephone cannot be used at the time of purchase. It should be...the telephone apparatus, is written into the EEPROM 370 along with the ID numbers before shipment of the product. When a purchaser purchases the product, he or she signs a contract...

Specification: ...a flow chart explaining a basic course of the product of the embodiment from the shipment to the start of use; and

Fig. 5 is a flow chart describing the operation...will now be explained.

First, a course of the present invention from the time of shipment to the start of actual use will be described with reference to Fig. 4. Unlike... ...the EEPROM 370 along with an operation disabling code in advance before the time of shipment by the manufacturer or the automobile telephone service company. More specifically, the identification numbers used... ...telephone are already written into the memory along with the operation disabling code before the shipment. If telephones having only the identification numbers written into the EEPROM are sold to users... ...inconvenience, the company writes a predetermined operation disabling code into the EEPROM 370 before the shipment so that the telephone cannot be used at the time of purchase. It should be...the telephone apparatus, is written into the EEPROM 370 along with the ID numbers before shipment of the product. When a purchaser purchases the product, he or she signs a contract...

Claims: ...comprising the steps of: writing identification numbers and operation control data into the EEPROM before shipment of the apparatus; and erasing the operation control data in accordance with a method of... ...a necessary contract has been completed between the service company and the user after the shipment.

9. A method according to claim 8, characterized in that a different operation control data...

Claims: ...331) detects the presence or the absence of said operation control data at a predetermined location in said memory means (370), disables operation of said apparatus if the presence of said operation control data at the predetermined location is detected, and enables operation of said apparatus if the absence of said operation control data at the predetermined location is detected.

2. An apparatus according to claim 1, characterized in that said memory means... ...for storing identification numbers of said apparatus; and

a second memory having a predetermined memory location for storing an operation disabling code, which can be electrically erased;

said judging means (331... ...means for detecting a presence or absence of said operation disabling code at the predetermined location in said second memory; and

disabling means for disabling operation of said transmission/reception means...

9/K/21 (Item 21 from file: 348)

EUROPEAN PATENTS

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Inventor:

- ...JP)
;;
- Takahashi, Sankichi...
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Country	Number	Kind	Date
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Abstract ...in said first material. A tank (1) stores the heat storage system. At a first location (2) of the conduit system, heat is removed from the heat storage system by converting it from said first state to said second state. At a second location (3) remote from said first location, heat is put into the storage system by converting it from said second state to...

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Specification: ...exchange for cooling and heating of the decanol/water system takes place at the same location. Consequently, only one such process can take place at one time.

The object of the...frozen state in the form of particles in said first material,

(b) at a first location removing heat from said heat storage system by converting it from said first state to said second state,

(c) at a second location remote from said first location putting heat into said storage system by converting it from said second state to said... ..d) moving at least part of said heat storage system between said first and second locations.

This method may include the step of storing said heat storage system in bulk in... ..second material, so as to maintain a constant temperature at at least one of said locations.

In another aspect, when either a water-in-oil type emulsion is used or an... ..frozen state in the form of particles in said first material,

(c) at a first location of said conduit system, output means for removing heat from said heat storage system by converting it from said first state to said second state,

(d) at a second location of said conduit system remote from said first location, input means for putting heat into said storage system by converting it from said second...the storage tank 1, an emulsion storage and slurry storage take place in the same container. Baffle plates 11 are provided vertically and alternately in the tank 1, and the tank...In the storage tank 1, the emulsion and the slurry are stored in the same container, with a boundary between them, as in Figs. 1 to 3. The slurry stored in...shown in Fig. 3 is, first, that a cross valve 120 for changing the effective location of the heating pump 31 in the circuit is provided in the pipe 32 which...1. The heat transport density was 38.4 kcal/kg, which is more than six times as much as in the case of cool water transport (6 kcal.kg at a...

Claims: ...system by converting it from said first state to said second state at a first location, (ii) at a second location remote from said first location putting heat into said storage system by converting it from said second state to said... ..iii) moving at least part of said heat storage system between said first and second locations.

9. A method according to claim 8 including the step of storing said heat storage... ..second material, so as to maintain a constant temperature at at least one of said locations.

11. A method according to any one of claims 8 to 10 wherein said first... ..in the form of particles in said first material, characterized by

(c) at a first location of said conduit system, output means (2,24,71) for removing heat from said heat... ..by converting it from said first state to said second state,

(d) at a second location of said conduit system remote from said first location, input means (3,34,81) for putting heat into said storage system by converting it...

9/K/22 (Item 22 from file: 348)

EUROPEAN PATENTS

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Inventor:

- ...GB)
;;
- Takahashi, Susumu...
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Total Word Count (All Documents)				

Specification: ...etc. and the resistance, etc. However it is desirable that it is more than 3 times as long as the time constants described above.

Furthermore the parts, in which FETs are... ..sup 8)/cm(sup 3)) 50 nm thick are superposed alternately on each other two times and the whole is put up and down between 2 n conductivity type GaAs layers...EMBODIMENT 3.

The numerical values used here of the thickness of the channel layer, the carrier density, the thickness of the quantum well layer, etc. are not at all absolute and...signal thus obtained is used as a reference signal for the corresponding synapse in the destination chip. Then a signal pulse is inputted in the control voltage input terminal 7 of the destination synapse so that the output of the discriminator circuit 502 is zero. The copy of...differential resistance element. As inciated in Fig. 15a, a p conductivity type GaAs layer 9 (carrier concentration 3 x 10(sup 1)(sup 7)/cm(sup 3), 50 nm thick) is... ..is supposed that the MQW structure layer 10 stated above is fabricated by repeating 100 times to superpose, from the p(sup +) conductivity type GaAs substrate 8 side, an i-Al... ..layer having a narrow band gap), respectively. Thereafter an n conductivity type GaAs layer 11 (carrier concentration 3 x 10(sup 1)(sup 7)/cm(sup 3), 50 nm thick) and an n(sup +) conductivity type GaAs layer 12 (carrier concentration 1 x 10(sup 1)(sup 8)/cm(sup 3), 300 nm thick) are... ..below. That is, a unit structure consists of 6 layers of n(sup +)-GaAs layer (carrier concentration 1 x 10(sup 1)(sup 8)/cm(sup 3), 50 nm thick)/i... ..5 nm thick)/i-GaAs layer (30 nm thick). This unit structure is superposed 5 times and finally an n(sup +)-GaAs layer 14 (carrier concentration 1 x 10(sup 1)(sup 8)/cm(sup 3), 300 nm thick) is...

Inventor:

- Takahashi, Shoji...

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Specification: ...to be small and makes it possible to decrease the amount of movement of a carrier, accommodating a disk cartridge, between a loading position and an unloading position, thereby overcoming the... ...and the upper arm are respectively disposed on the lower and upper sides of the carrier, the carriage being adapted to be pushed upwardly by a pushup portion provided on the carrier. When the carrier moves upwardly from a loading position to an unloading position, the upper arm is swung... ...operation, a stable swinging operation is ensured.

Accordingly, in accordance with the present invention, the carrier moves vertically during the loading or unloading of a disk cartridge, the upper arm is swung open upwardly and the carriage downwardly simultaneously with the vertical movement of the carrier from the loading position to the unloading position. Thus, by virtue of this double swinging... ...but also the carriage effects an opening operation, the required amount of movement of the carrier between the loading position and the unloading position can be made smaller than with the conventional apparatus, so that a mechanism for driving the carrier can be arranged more simply.

Furthermore, as described above, since the carriage assembly in accordance...floppy disk accommodated in the disk cartridge in the loaded state.

As is known, a carrier 12 is provided within a frame 10 in such a manner as to be vertically movable between a loading position and an unloading position. The vertical movement of this carrier 12 is controlled by a slide plate and other members, but since this carrier mechanism is conventionally known, a description and detailed illustration thereof will be omitted in this embodiment.

The carrier 12 itself is configured as a frame, and a disk cartridge 14 can be mounted... ...10.

As shown in Fig. 2, a pulley 22 which rotates integrally with a rotating hub of the floppy disk 16 is disposed rotatably at a substantially central position of the... ...the carriage 32 is formed by bending a flat plate and is disposed below the carrier 14. The upper and lower heads 28, 30 are reciprocated along the head moving path... ...via a lower head baseplate 45. The other end of this carriage 32 detours the carrier 12 and extends upwardly, and an end of its upwardly extending portion forms an upper...36 is swingably supported by the carriage 32 on the upper surface side of the carrier 12.

As is apparent from Fig. 2, ends of a pair of arm legs 36a... ...as a whole.

A characteristic feature of the present invention lies in that, when the carrier 12 moves upwardly from the loading position to the unloading position, the upper arm 36... ...the carriage 32 is swung open downwardly. For this purpose, in the present invention, the carrier 12 is provided with a pushing-up portion, and the pushing-up portion in the... ...formed by a carriage-pushup spring 54 secured on the upper surface side of the carrier 12. This carriage pushup spring 54 has a substantially L-shaped section, and its long portion is secured on the upper surface of the carrier 12,

while its short portion extends to the undersurface side of the upper arm-fixing... ..with a projection 56 for adjusting the height of the upper arm, and, when the carrier 12 moves upwardly to the unloading position, the upper surface of the carrier 12 is brought into direct contact with the projection 56, thereby moving the upper arm... ..position with a predetermined pressure.

Meanwhile, when the disk cartridge 14 is removed from the carrier 12, the carrier 12 moves upwardly from the loading position shown in Fig. 1 toward an unloading position...upward arm-fixing portion 32a of the carriage 32 during the upward movement of the carrier 12. Subsequently, the carrier 12 itself is brought into contact with the projection 56 for adjusting the height of... ..from the loading position shown in Fig. 1.

Hence, a space sufficient for unloading the carrier 12 is created by the portion of this retraction without the disk cartridge 14 coming... ..collision with the lower head 30 even if the amount of upward movement of the carrier 12 decreases.

It goes without saying that, at this juncture, the upper arm 36 is... ..projection 56 for adjusting the height of the upper arm comes into contact with the carrier 12, as described above, and the upper head 28 can retract sufficiently from the disk... ..the disk cartridge 14 can be created while the amount of upward movement of the carrier 12 is reduced.

Although in the above-described embodiment, a resilient carriage pushup spring 54... ..in accordance with the present invention, at the time of unloading a disk cartridge, the carrier causes the right-hand side of carriage, as viewed in Fig. 3, to swing open... ..of this opening operation in the two directions, and the amount of movement of the carrier from the loading position to the unloading position can be reduced. Accordingly, there is the...

Claims: ...B1

1. A read/write head carrying mechanism including a frame (10) and a carrier (12) in which a disc cartridge (14) accomodating a floppy disc (16) is detachably loaded... ..assuming a loading and an unloading position in conformity with a vertical movement of said carrier (12) with respect to the frame, said carrying mechanism comprising a carriage (32) with an... ..38) secured to the frame (10);

in that the carriage (32) is disposed underneath said carrier (12) and is supported slidably and pivotably by said guide rail (38), said upper arm (36) being swingably supported by said carriage (32) on the upper surface of said carrier (12);

and in that a push up portion (54) is provided on said vertically moving carrier (12) in such a way that, when the carrier (12) moves in an upward direction, the push up portion pushes that part of the... ..read/write head carrying mechanism further comprises:

(a) a pulley(22) for driving a rotary hub of the floppy disk(16) in a loaded state by being engaged with said rotary hub, said pulley(22) being provided rotatably on said frame;

(b) a spindle motor(24) secured to said frame(10) at a position spaced apart from said carrier(12), adapted to move vertically between the loading position and the unloading position; and

(c... ..to said frame(10) at a position spaced apart from a moving area of said carrier(12) and including a pinion(44) provided on a main spindle of the feed motor... ..carriage(32), opposite to the end portion provided with said lower head(30) meanders said carrier and extends toward the upper arm side in an L-shaped configuration, said another end... ..mutually opposing portions of the balance spring(39, 41) at the loading state of said carrier(12), said retaining tongue(34a) assuming a horizontal position not subject to the unidirectional resilient...is formed by a carriage pushup spring(54) secured to the upper surface of said carrier(12), a part of the carriage pushup spring(54) is adapted to push said carriage upwardly when said carrier(12) moves from the loading position to the unloading position.

11. A read/write head... ..and a short side, the long side being secured to the upper surface of said carrier(12) while the short side being disposed near the undersurface side of said upper arm... ..said upper arm(36) and being capable of contacting with the upper surface of said carrier(12).

9/K/24 (Item 24 from file: 348)

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Inventor:

- ...JP)
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- Takahashi, Shigeru...
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Total Word Count (All Documents)			

Specification: ...in which the magnitude of magnetic flux density is about 1.0 to 1.1 times that of magnetic flux density cooperating with the TE(sub 0)(sub 1) mode (circular...preexistent on the substrate until the energy of the activated species is minimized at a destination of the reconfigurational and reorientational motion. Therefore, the deposited film can be increased in densification...pipe, trichloro aluminum (A(liters)C(liters)(sub 3)) carried by a N(sub 2) carrier is admitted through the second gas inlet pipe, and Aluminum nitride is deposited inside the... ..preexistent on the substrate until the energy of the activated species is minimized at a destination of the reconfigurational and reorientational motion. Therefore, the higher the concentration of the deposited activated...range in which the magnitude of magnetic flux density is 1.0 to 1.1 times the magnitude of magnetic flux density necessary for the theoretical ECR condition in the TE...

Specification: ...in which the magnitude of magnetic flux density is about 1.0 to 1.1 times that of magnetic flux density cooperating with the TE(sub 0)(sub 1) mode (circular...preexistent on the substrate until the energy of the activated species is minimized at a destination of the reconfigurational and reorientational motion. Therefore, the deposited film can be increased in densification...pipe, trichloro aluminum (A(liters)C(liters)(sub 3)) carried by a N(sub 2) carrier is admitted through the second gas inlet pipe, and Aluminum nitride is deposited inside the...preexistent on the substrate until the energy of the activated species is minimized at a destination of the reconfigurational and reorientational motion. Therefore, the higher the concentration of the deposited activated...range in which the magnitude of magnetic flux density is 1.0 to 1.1 times the magnitude of magnetic flux density necessary for the theoretical ECR condition in the TE...

Claims: ...maximum magnetic flux density within said discharge tube (2) is about 1.5 or more times the magnitude of the magnetic flux density at a resonance conditioning position at which said...range in which the magnitude of magnetic flux density is 1.0 to 1.1 times the magnitude of magnetic flux density necessary for causing the electron cyclotron resonance in the... ..range in which the magnitude of magnetic flux density is 1.0 to 1.1 times the magnitude of magnetic flux density necessary for causing the electron cyclotron resonance in the...

Claims: ...means for adjusting the electron cyclotron resonance position are provided in one of the following locations: - externally of the operation chamber (9) and parallel to the substrate holder (8), - internally of... ..range in which the magnitude of magnetic flux density is 1.0 to 1.1 times the magnitude of magnetic flux density necessary for causing the electron cyclotron resonance is continuously...

9/K/25 (Item 25 from file: 348)

EUROPEAN PATENTS

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Inventor:

• Kawano, Tsuyoshi...

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Country	Number	Kind	Date
Type	Pub. Date	Kind	Text
...Date of filing of request for examination... ..Date of despatch of first examination report	19		
Available Text	Language	Update	Word Count
Total Word Count (Document A)			
Total Word Count (Document B)			
Total Word Count (All Documents)			

Specification: ...of the EOE. DESCRIPTION OF THE PRIOR ART

An EOE is an end of a container which can be opened by the pulling an opening tab secured to the partially removable... ..can end panel by providing a portion of the non-removable section adjacent to the location at which a tab is secured with for example a machined portion which serves to...

9/K/26 (Item 26 from file: 348)

EUROPEAN PATENTS

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Country	Number	Kind	Date
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Type	Pub. Date	Kind	Text
Available Text	Language	Update	Word Count
Total Word Count (Document A)			
Total Word Count (Document B)			
Total Word Count (All Documents)			

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Set	Items	Description
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S1	19641	S AU=(TAKAHASHI, S OR TAKAHASHI S? OR SHINICHI (2N)TAKAHASHI) OR BY=(SHINICHI (2N)TAKAHASHI)
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S2	1057	S AU=(KAWANO, T OR KAWANO T? OR TAKENARI (2N)KAWANO) OR BY=(TAKENARI (2N)KAWANO)
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S3	5	S AU=(TSUGU, K OR TSUGU K? OR KAZUO (2N)TSUGU) OR BY=(KAZUO (2N)TSUGU)
----	---	--

S4	1944	S AU=(NISHIOKA, K OR NISHIOKA K? OR (KENNETH OR KEN) (2N)NISHIOKA) OR BY=((KEN OR KENNETH) (2N)NISHIOKA)
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S5	18292	S PD<20030130 AND (S1 OR S2 OR S3 OR S4)
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S6	0	S S5 AND ((DIVERTE??? OR DIVERSION OR REROUT??? OR REDIRECT???) (5N) (SHIPMENT OR SHIPMENTS OR DELIVERY OR DELIVERIES OR IN(W)TRANSIT OR FREIGHT OR UNIT OR UNITS OR PACKAGE OR PACKAGES OR PARCEL OR PARCELS))
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S7	115	S S5 AND (((ESTIMAT????) (5) (TIME OR TIMES OR DATES OR DATE OR SCHEDUL???) OR ETA OR ETAS) AND (DESTINATION OR DESTINATIONS OR DROPOFF OR DROP(W)OFF OR HUB OR LOCATION OR LOCATIONS)
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S8	26	S S7 AND (SHIPMENT OR SHIPMENTS OR FREIGHT OR CARRIER OR PACKAGE OR PACKAGES OR PARCEL OR PARCEL OR CONTAINER OR CONTAINERS)
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S9	26	RD (unique items)
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Set	Items	Description
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S1	19641	S AU=(TAKAHASHI, S OR TAKAHASHI S? OR SHINICHI (2N)TAKAHASHI) OR BY=(SHINICHI (2N)TAKAHASHI)
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S2	1057	S AU=(KAWANO, T OR KAWANO T? OR TAKENARI (2N)KAWANO) OR BY=(TAKENARI (2N)KAWANO)
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S3	5	S AU=(TSUGU, K OR TSUGU K? OR KAZUO (2N)TSUGU) OR BY=(KAZUO (2N)TSUGU)
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S4	1944	S AU=(NISHIOKA, K OR NISHIOKA K? OR (KENNETH OR KEN) (2N)NISHIOKA) OR BY=((KEN OR KENNETH) (2N)NISHIOKA)
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S5	18292	S PD<20030130 AND (S1 OR S2 OR S3 OR S4)
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S6 0 S S5 AND ((DIVERTE??? OR DIVERSION OR REROUT??? OR
REDIRECT???) (5N) (SHIPMENT OR SHIPMENTS OR DELIVERY OR DELIVERIES OR IN(W)TRANSIT OR
FREIGHT OR UNIT OR UNITS OR PACKAGE OR PACKAGES OR PARCEL OR PARCELS))

S7 115 S S5 AND (((ESTIMATE???) (5) (TIME OR TIMES OR DATES OR DATE OR
SCHEDULE???) OR ETA OR ETAS) AND (DESTINATION OR DESTINATIONS OR DROPOFF OR DROP(W)OFF OR
HUB OR LOCATION OR LOCATIONS)

S8 26 S S7 AND (SHIPMENT OR SHIPMENTS OR FREIGHT OR CARRIER OR PACKAGE OR
PACKAGES OR PARCEL OR PARCEL OR CONTAINER OR CONTAINERS)

S9 26 RD (unique items)

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